

CHILTON'S

JUNE 1957

MOTOR AGE



Jobber Executive Edition—follows page 32

Does things no other ring can do!



Sealed Power's NEW Stainless Steel Oil Ring

Now you can put performance into your ring jobs that can't be matched by any other oil ring! Sealed Power's Stainless Steel Oil Ring holds full tension at engine operating temperatures, positively resists corrosion and actually hardens in use.

DESIGN ADVANTAGES



← RADIAL PRESSURE

Circumferential abutment type design makes the ring independent of contour and depth of piston groove. It exerts its pressure uniformly — conforms more readily to the bore. The SS-50U is easy to assemble on piston.



→ CHROME RAILS

Full chrome-faced side rails assure long ring life. Special treatment of these rails produces quick seating.

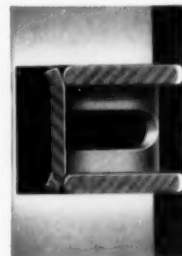


← BETTER OIL CONTROL

assured by uniform radial pressure. Full flow of oil back to crankcase obtained by maximum ventilation.

SIDE-SEALING →

is assured by the proper axial pressure of rails against sides of groove. This provides smoke control under high vacuum conditions.



SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST FOR RE-RING!

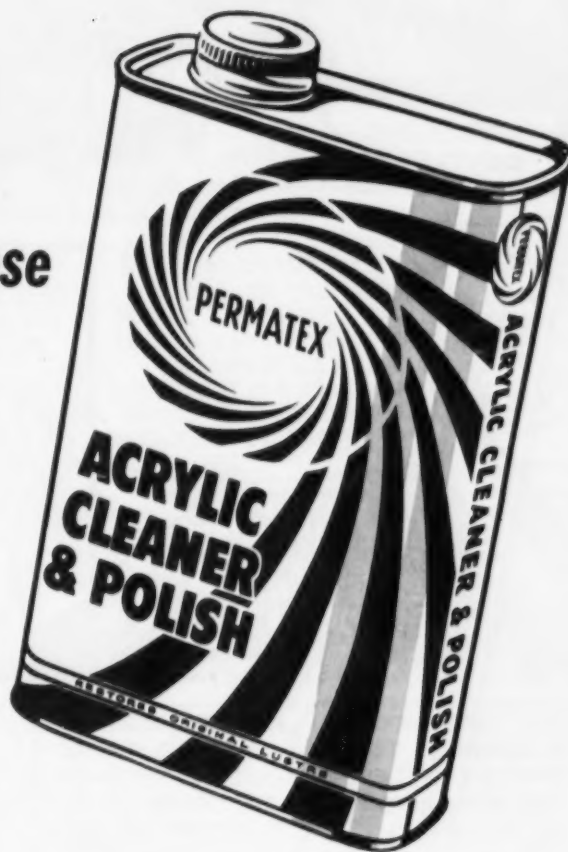
BEST FOR RE-BORE!

Now PERMATEX Offers You The SAFEST ACRYLIC CLEANER MADE

New
**PERMATEX Acrylic
Cleaner and Polish**
requires no elbow grease

Permatex Acrylic Cleaner and Polish contains "feather touch" abrasives which restore life to acrylic finishes, "heal" tiny nicks and blemishes. It *can't scratch or craze acrylic finishes as conventional cleaners do.*

Needs no elbow grease! Just wipe it on and rub lightly. Wax need not be applied — *the luster is in the acrylic resin itself.*



Don't run the risk of damaging customers' cars!

Order Permatex Acrylic Cleaner and Polish from your jobber now.

Contains no waxes or oils to gum up the finish!



PERMATEX COMPANY, INC.

General Offices:
300 Broadway, Huntington Station, N.Y.

Factories:
Brooklyn 35, N.Y., Kansas City 15, Kans.

ANOTHER BLUE STREAK
SECRET SERVICE TIP FOR YOU.

SHERLOCK McKANICK and MIKE

The Case of the
RATTLESNAKE in the
REGULATOR.

HEY, SHERLOCK
THIS VOLTAGE
REGULATOR SOUNDS
LIKE A
RATTLESNAKE!

QUICK, MIKE, KILL THAT
ENGINE BEFORE YOU BURN
UP THE REGULATOR POINTS!

RATTLE

RATTLE

RATTLE

JIMINY,
SHERLOCK
-- WHAT
DID I DO
WRONG?

YOU DIDN'T POLARIZE THE
GENERATOR! YOU SHOULD
HAVE CONNECTED A JUMPER-
WIRE MOMENTARILY ACROSS
THE 'A' & 'B' TERMINALS.
THAT RATTLE IS THE CUTOFF
POINTS TRYING TO CLOSE
AND START THE REGULATOR.

BUT HOW CAN I
BE SURE WHETHER
THE GENERATOR IS
POLARIZED?

ELEMENTARY, TO BE
CERTAIN THE GENERATOR
HAS BEEN POLARIZED, LOOSEN
THE FAN BELT. NOW, WATCH
WHEN I AGAIN CONNECT
THIS WIRE MOMENTARILY
TO THE 'A' & 'B' TERMINALS...

WHY THE GENERATOR
IS **TURNING**. AND THE
FAN BELT ISN'T OVER
THE GENERATOR
PULLEY!

RIGHT, MIKE.
THAT'S YOUR FINAL
CHECK TO TELL WHEN
THE GENERATOR IS
POLARIZED THE SAME
AS THE BATTERY.

GEE, SHERLOCK
...I WISH I
KNEW IGNITION
LIKE YOU!

BLUE STREAK'S
IGNITION SERVICE
BULLETINS
KEEP ME
UP TO DATE!

MECHANICS - WRITE FOR **BLUE STREAK**
BULLETIN No. 69-52, "RATTLESNAKES AND
REGULATORS," TO STANDARD MOTOR PRODUCTS, INC.
37-18 NORTHERN BLVD, LONG ISLAND CITY 1, N.Y.
(become a **BLUE STREAK** registered dealer
and get the complete file.)

MIKE,
LET'S GO
DANCING
TONIGHT!

CAN'T GOT TO READ
MY **BLUE STREAK**
SERVICE BULLETINS!

NO WONDER 40,000
ALERT DEALERS SAY
BLUE STREAK IGNITION
IS BETTER FOR
YOUR BUSINESS!

WORLD'S FOREMOST
HEAVY-DUTY
IGNITION LINE

BLUE STREAK

REGULATORS • SWITCHES • COILS • CONDENSERS • WIRE and CABLE • CONTACT POINTS

CHILTON'S

MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

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JUNE 1957

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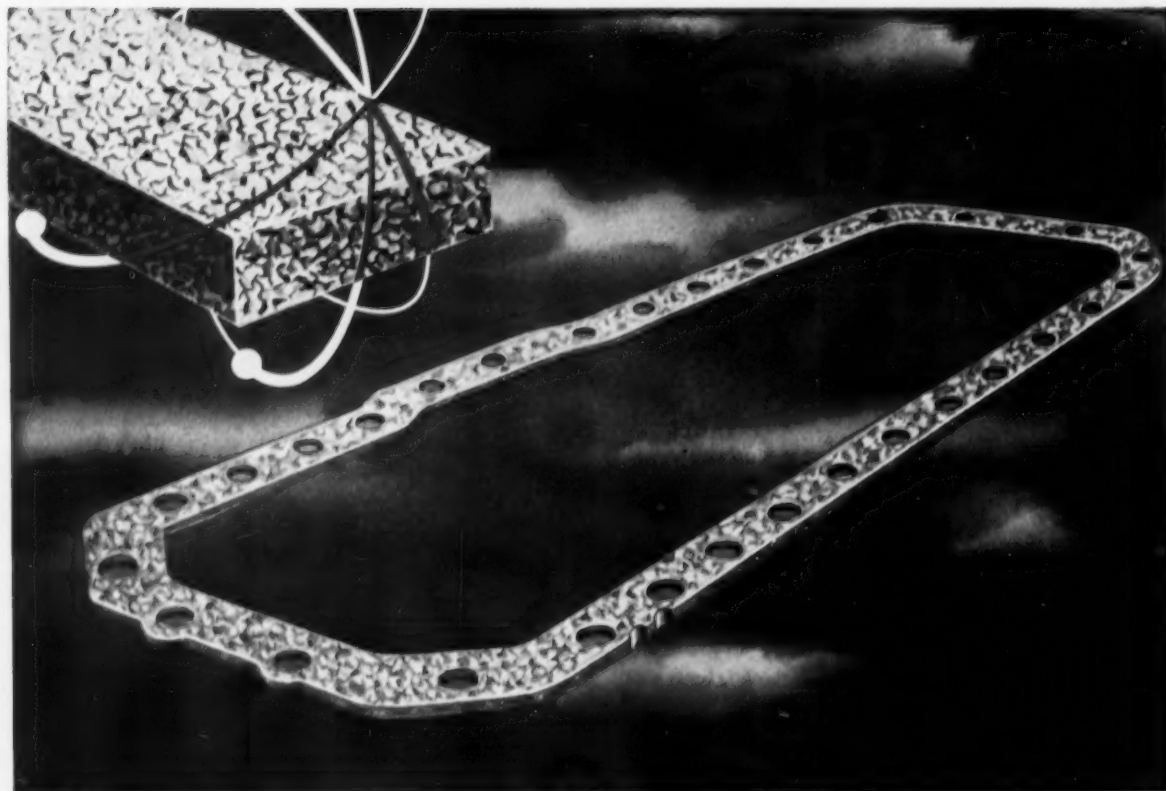
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Electronic Baked Cork—the secret of better sealing with Armstrong-Victor Gaskets

Maximum uniformity of density . . . of tensile strength . . . of compression and recovery range . . . assured by this exclusive A-V process

Electronic baking cures cork composition in minutes while the old steam method takes hours. It cures thoroughly and evenly from inside out. It prevents over-curing on the outside of mats before the inside is done as frequently happens with steam baking.

Yes, electronic baking means better, more uniform quality cork gaskets—yet with no increase in price.

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Only genuine A-V Replacement Gaskets have this trademark—the 2 notches.

Armstrong-VICTOR

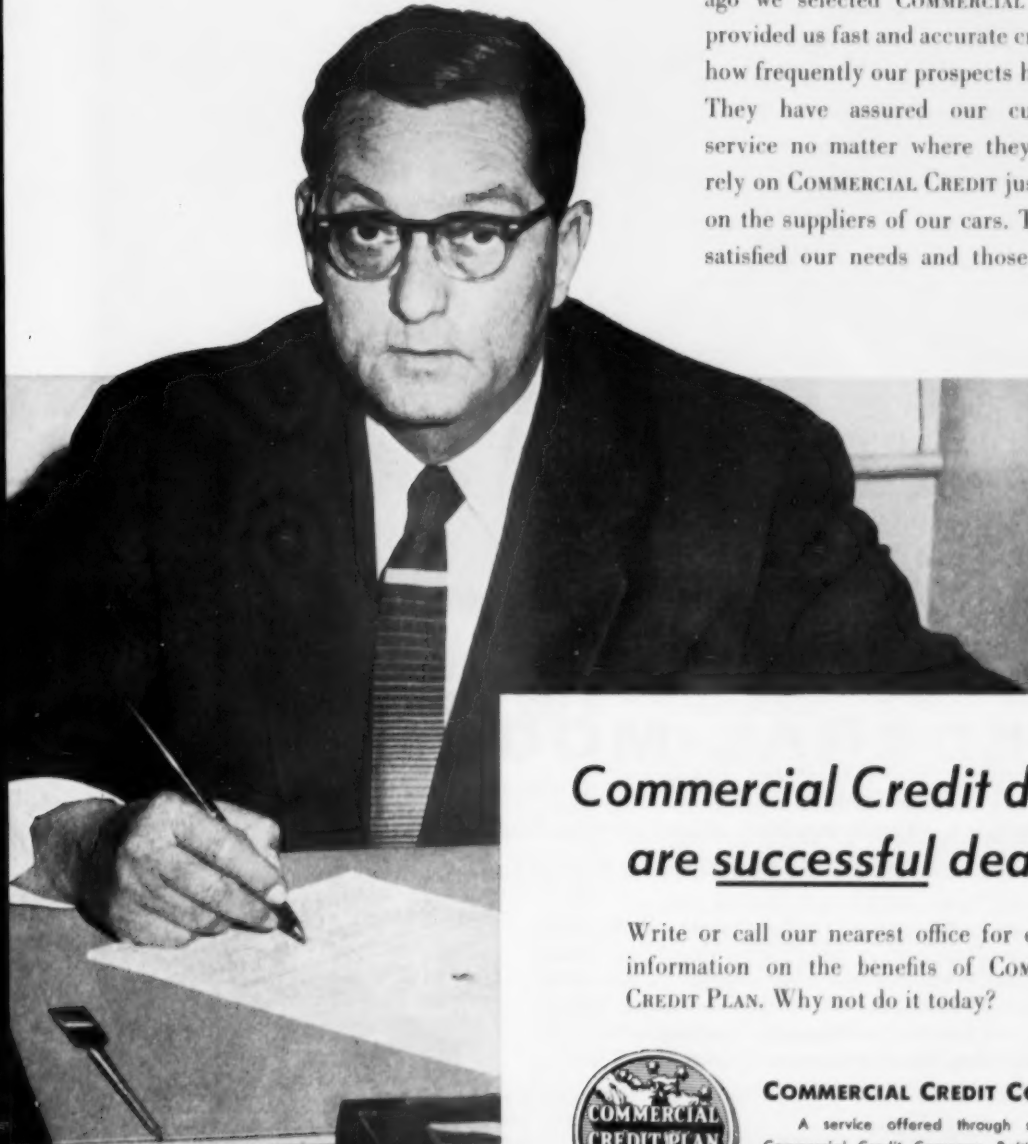


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"...completely satisfied our needs and those of our customers"

says **MR. KARL WISELOGEL**, president
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dealer of Panama City, Fla.

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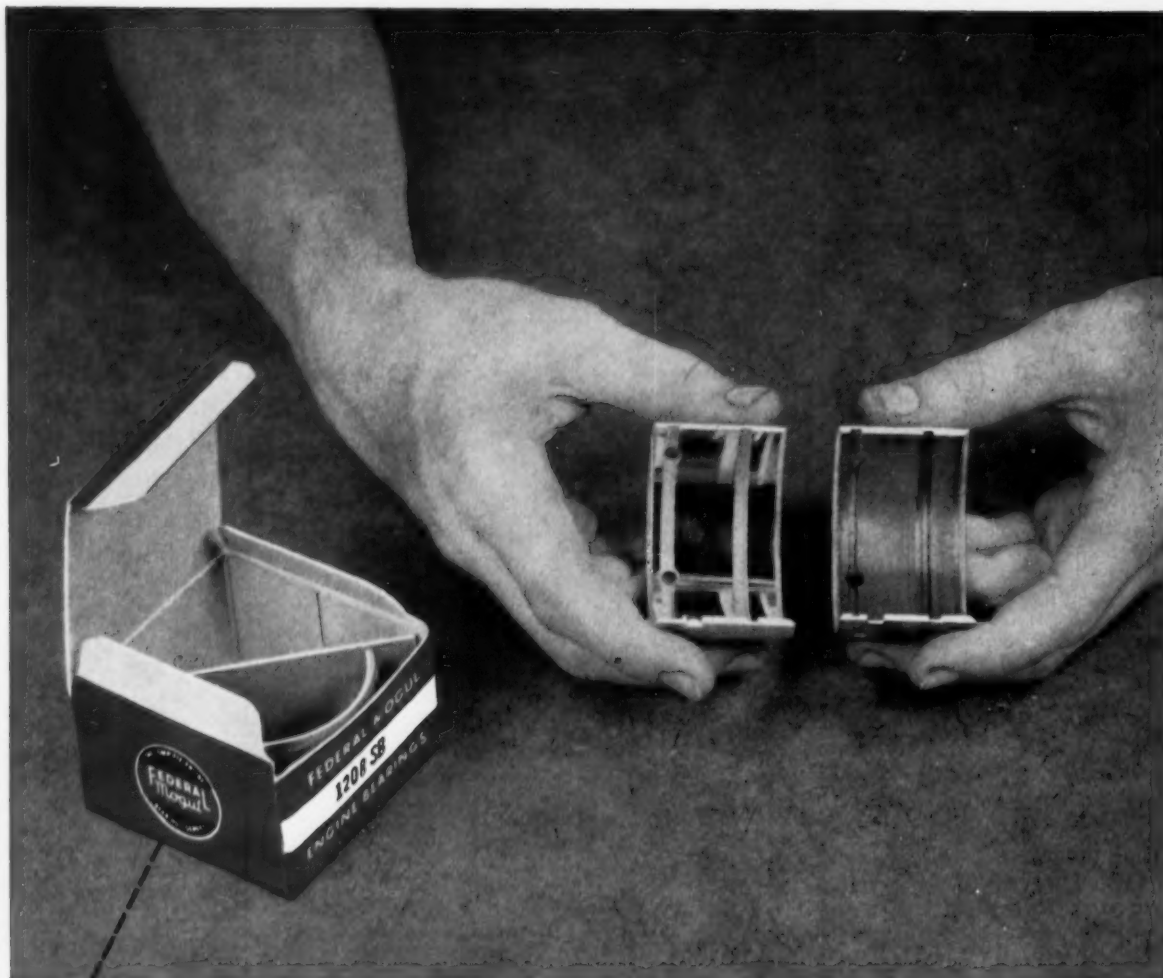
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in the FEDERAL-MOGUL LINE!

**That's why most mechanics prefer to buy
 replacements in the black and red box**

When you're ready to get new bearings to match the old, you'll always meet exactly the right replacements in the Federal-Mogul line. That's because the line is *complete*—whether you need bearings for one of the newest engines or a real old timer. It's a fact that most of the 700,000 mechanics in the U.S. and Canada prefer service bearings in the black and red box—they know they can depend upon Federal-Mogul quality and service!

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC.



RESEARCH • DESIGN • METALLURGY • PRECISION MANUFACTURING • SERVICE



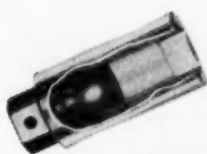
NEW! PROTO'S "Rotahead"

**FREE WHEELING
SOCKET HINGE HANDLE**

Every Tool User Will Want One!



ALSO NEW!



Patented Spark Plug Holding Sockets with 3/16" Opening. Cutaway view. Rubber insert holds plug securely, speeds work, prevents burning of fingers on hot manifolds. No. 5026HP—3/8" drive. No. 5326HP—1/2" drive.



Whitworth 3/16" to 3/8" Opening Sockets. For repair of foreign cars and motorcycles. Nos. 5206W-5212W—3/8" drive.



Double Hex Sockets. For elastic stop nuts. Nos. 4708T-4714T (1/4"-7/16" openings)—1/4" drive. Nos. 5210-5228 (5/16"-7/8" openings)—3/8" drive.

Revolutionary in design, the patented "Rotahead" socket handle takes the place of a 1/2" drive reversible ratchet and conventional hinge handle. Its strong free-wheeling mechanism permits a new bite every 12 degrees. The compact head gets into tight places. And the 16" length provides high leverage. Buy this sensational time saver at your PROTO dealer's. Send 10¢ for catalog of entire line to

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Eastern Factory, Jamestown, N.Y., Canadian Factory, London, Ont.

5453





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Johns-Manville



REPEAT PROFITS come from doing the right kind of job with skilled workmanship and quality materials. And J-M Lined Brake Shoes and Exchange Plan give you a range of select materials that precisely match the requirements of every brake system.

Depending upon the service need, you have your choice of—J-M PB Sets that are power built for power brakes—Custom Four Star sets for standard systems—or popular WireKlad lining.

But quality isn't all you get . . . J-M backs up these



Johns-Manville



when you use **Brake Lining**

outstanding materials with sales-service training for dealers; with consistent, effective merchandising to car owners in your community; with distributors who can fill your requirements quickly and accurately from stock, and who supply constructive ideas to expand your brake service volume and profits.

There is a reliable J-M Distributor near you. Ask him about the advantages of the J-M Lined Brake Shoe Exchange Plan. Or, write Johns-Manville, Box 14, New York 16, N. Y. In Canada, Port Credit, Ont.

asbestos **Brake Lining**

**J-M Dealers enjoy
many important
extra benefits**



Sales-Service Clinics—Thorough training program covering latest techniques of servicing brakes, including the newest types, that make brake work more efficient, more profitable.



Pre-sold customers and prospects—Powerful advertising including the NBC Television show "Meet the Press" and Saturday Evening Post, plus point-of-sale material, help you sell more.



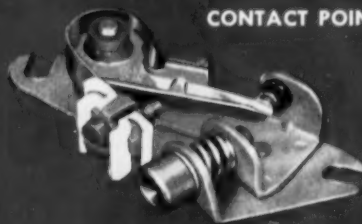
Reliable Distributors—J-M Distributors are carefully selected on the basis of their understanding of your needs, their ability to give you the service you require to build your business.

DISTRIBUTOR CAP



For like-new distributor performance,
always replace with these Delco-Remy
original equipment service parts.

CONTACT POINT SET



DISTRIBUTOR ROTOR



DELCO-REMY ORIGINAL EQUIPMENT SERVICE PARTS RESTORE LIKE-NEW PERFORMANCE TO DELCO-REMY EXTERNAL ADJUSTMENT DISTRIBUTORS

Like-new performance can be easily restored in Delco-Remy external adjustment distributors when Delco-Remy original equipment service parts are used. Naturally so, for these parts are identical in every quality detail to the parts that went into the distributor when it was manufactured.

DELCO-REMY PARTS WORK BETTER BECAUSE

- 1** DISTRIBUTOR CAPS are *designed and built* with specific characteristics including: functional overall shape; precision fit; scientifically shaped, voltage-saving internal ribbing; highly dielectric, shock-resistant quality materials.
- 2** ROTORS are *designed and built* to combine maximum strength with minimum weight; with superior balance to insure smooth rotation at high speeds; with voltage-saving contours for trouble-free, easy mounting and for radio noise suppression (resistor models).
- 3** CONTACT SETS are one-piece assemblies, precisely adjusted and aligned; easier to install and readily adjustable *while the engine is running!*

Always replace with Delco-Remy original equipment service parts when you service Delco-Remy equipped cars and trucks. They are available from your car or truck dealer or the United Motors System.

DELCO - REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA



GENERAL MOTORS LEADS THE WAY—STARTING WITH

Delco-Remy

ELECTRICAL SYSTEMS

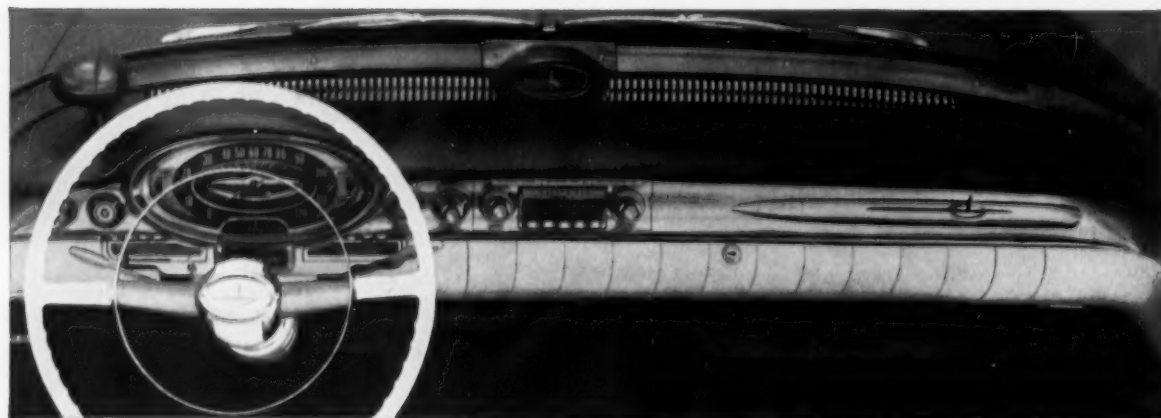
OLDSMOBILE

FIRST WITH THE FEATURES WITH NEW SALES APPEAL

*Another
demonstration
natural...
exclusively
OLDS!*



NEW STRUT-MOUNTED INSTRUMENT PANEL



The key to all that's new inside an Olds!

A brand new concept in instrument panel design, Oldsmobile's new Strut-Mounted Instrument Panel keynotes a host of exclusive new interior features. And for Olds dealers it's the key to *bigger results from the seat that sells* . . . for Oldsmobile's unique Strut-Mounted Panel is the first *big difference* every Olds prospect sees when he gets behind the wheel.

Strut-mounting, in itself, is a masterpiece of creative engineering. The instrument panel becomes a structural member, giving the body added strength and rigidity. The free air space between the panel and windshield improves circulation, completely eliminates pockets of hot or cold air under the dash. What's more, with the radio speaker

now located behind the panel, sound follows the curved windshield and is evenly distributed throughout the car. Right in front of every prospect's eyes are such extra-value features as the exclusive Dual-Range Power Heater, new 27-inch glove compartment and Safety-Recessed Controls. Just one more reason why it's *great* to be with Olds!

OLDSMOBILE • DIVISION OF GENERAL MOTORS CORPORATION • LANSING, MICHIGAN

**NOW, FOR THE FIRST TIME...
A COMPLETE GUIDE TO ACCURATE
REFRIGERANT CHARGES FOR ALL CAR
AIR CONDITIONING SYSTEMS!**



SO EASY TO KNOW EXACTLY WITH THE TRONA*

CHARG-A-CHART*



American Potash & Chemical Corporation

REFRIGERATION DEPARTMENT

3030 W. 6TH STREET, LOS ANGELES 54, CALIFORNIA
99 PARK AVENUE, NEW YORK 16, NEW YORK

TRONA



Why guess? Know *exactly* the proper refrigerant charge for factory-installed and independent air conditioning systems...and know it quickly with the convenient new Trona CHARG-A-CHART! A glance gives you the information you need to do the job *perfectly*. Get ready for the *increased* air conditioning business you'll be doing with "Freon-12"† automotive refrigerants available in convenient Trona CHARG-A-CAN* disposable containers and bulk cylinders. Trona refrigerants are stocked and serviced by your local refrigeration wholesaler. Contact him today!

†TRADEMARK OF E. I. DUPONT DE NEMOURS & CO., INC. *TRADEMARKS AF&C

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YOUR CHARG-A-CHART*...
JUST FILL OUT AND
MAIL TODAY!**

AMERICAN POTASH & CHEMICAL CORPORATION
3030 West Sixth Street
Los Angeles 54, California
Please send me my free copy of the
new Trona CHARG-A-CHART.

Name _____
Title _____
Company _____
Address _____
City _____ State _____



Available bonded or riveted for every make and model car

Raybestos linings lick HEAT and WEAR brake problems for your customers

Boost your reputation and brighten your profit picture by giving your customers a brake lining that really licks dangerous heat and wear: new improved Raybestos, for both power and manually operated brakes. New manufacturing processes, new compounds, new resins and binders, and new "fire band" grooving for some cars, all combine to produce the six performance characteristics your customers want . . . and need:

Greater heat resistance • Greater fade resistance
Really quiet operation • Increased braking power
Longer life • Positive safety

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Raybestos
AMERICA'S BIGGEST SELLING FRICTION MATERIAL

USE THE *Raybestos* **7** POINT BRAKE CHECK

includes adjustment

1. Pull front wheels, inspect linings
2. Check brake drums
3. Inspect front wheel bearings
4. Clean brake assembly
5. Check hydraulic system
6. Adjust brakes or recommend a reline
7. Road test brakes

You get paid for every car you check
Ask your Raybestos jobber for full details today

RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., Bridgeport, Conn.

RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Radiator Hose • Industrial Rubber • Engineered Plastics Sintered Metal Products • Rubber Covered Equipment • Asbestos Textiles Laundry Pads and Covers • Mechanical Packings • Abrasive and Diamond Wheels • Industrial Adhesives • Bowling Balls





Right! This new MoPar "Multi-purpose" Piston Ring Set is ideal for all conditions . . . can be used in new or rebored cylinders and in cylinders with taper wear. That means lower inventory investment, faster turnover of inventory, and it saves you time. And this new set offers—

(1) Less ring wear. (2) Less cylinder wear. (3) Long life, with full chrome plating on top compression and oil control rings. (4) Simplified installation.

Order these new "Multi-purpose" sets now from your MoPar wholesaler or your Plymouth, Dodge, De Soto, Chrysler, Imperial or Dodge Truck dealer!



CHRYSLER MOTORS CORPORATION ➤ MOPAR DIVISION
DETROIT 31, MICHIGAN

FREE—MoPar Piston Ring Quick Reference Wall Chart. Tells you at a glance what ring size any Chrysler Corporation car requires. Call your MoPar wholesaler, or send the coupon:


Sales Department, Chrysler Motors Corporation, MoPar Division
P.O. Box 1718, Detroit 31, Michigan

Yes! Send me the handy Piston Ring Chart D-16122

Name _____

Address _____

City _____ State _____



**"Say, these Bendix
Power Brakes are a
cinch to install!"**

BIG MARKET, HIGH PROFIT, *That's the whole story on*

"How long has this been going on?" That's a question we often hear from garage owners, service station proprietors and auto dealers who have discovered the profits to be made in Bendix® Power Brakes. And the same question is echoed by their mechanics when they find out what an easy job it is to make a Bendix Power Brake installation.

The answer is simple and, for a lot of people, rather sad. It has been

going on for quite a while now—and a lot of folks have missed out on a lot of business because they didn't take advantage of it.

The Bendix Power Brake story is short and to the point. The market is tremendous; the installation is simple; the unit profit is excellent. That's about all there is to it—except for one thing: Bendix Power Brakes are easy to sell.

Find out for yourself. Try telling

every customer who drives in that you can put Bendix Power Brakes on his car in about an hour's time and that it will cost him only sixty dollars (average cost). Just make sure you're *ready* to do the job.

Plain black and white figures tell the story. There are more than 45 million vehicles on the road today *without* power brakes. A high percentage of these cars *would* have them if their owners knew how easily

"Sure, and over
45 million vehicles
need 'em!"



STROMBERG
CARBURETORS



METALCLENÉ



ECONOCLENÉ



FACTORY-NEW LINED
BRAKES SHOES

STROMBERG® CARBURETORS—
Cars, Trucks, Industrial • BEN-
DIX VACUUM POWER—Power
Brakes—Passenger Cars, Trucks,
Trailers • HYDRAULIC CON-
TROLS—Power Steering—Passen-
ger Cars, Trucks, Trailers, Buses,
Industrial, Agricultural • BEN-
DIX BRAKES—Factory-New Lined
Shoes, Lining Segments, Repair
Parts • BENDIX® METALCLENÉ
—Metal Parts Cleaner • BEN-
DIX® ECONOCLENÉ—Multi-Pur-
pose Cleaner Concentrate.

*REG. U. S. PAT. OFF.

EASY INSTALLATION

Bendix Power Brakes!

and how reasonably they could have them. You have to tell them.

A lot of progressive people in the auto-
motive service business all over the coun-
try have tried it. They tell us the market
is strong and steady. But you do have to
sell. Sales seldom come without asking
because car owners don't know the Ben-
dix Power Brake story. *You do.* Tell
them—and you, too, will be saying,
"How long has this been going on?"

*REG. U. S. PAT. OFF.

How to Get a Power Brake Demonstrator

Call your nearest Bendix Distribu-
tor for a special demonstrator unit.
Specially priced for service sta-
tions, garages and car dealers.

Bendix PRODUCTS DIVISION **South Bend, IND.**



Extra
"VACATION"

SAFETY
GREASE FRONT WHEELS
ALWAYS USE
NEW OIL SEALS

NATIONAL
OIL SEALS

FEDERAL-MOGUL SERVICE • DIVISION OF FEDERAL-MOGUL POWER BEARING CO., INC.

GREASE FRONT WHEELS
ALWAYS USE
NEW OIL SEALS

FEDERAL-MOGUL SERVICE • DIVISION OF FEDERAL-MOGUL BOWER BEARINGS, INC.



"SERVICE" **Profits**

with National's Big Red Cabinets!

National Oil Seal Service Stocks

**Extra profits on repacks, brake and wheel
work, major overhauls**

No time lost sending out for seals

Controlled storage for seals and bearings

All fast-moving numbers; no deadwood

All-steel cabinet free with stock

World's best interchange data

*Join the 45,000 profit-minded shops now stocking
National Oil Seals. Your jobber will install and
maintain your stock. Call him today!*

FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc.
Detroit 13, Michigan



**CARE
WILL SAVE
YOUR CAR**



4236



and old
**WIN BOUQUETS FROM NEW CUSTOMERS —
 WITH THIS SIMPLE ADVICE**

Tell 'em the facts about cooling system care: that the winter-weakened inhibitors in used anti-freeze *lose* their power to protect against rust and corrosion. That without this protection, continuous damage to the cooling system, or even a major breakdown, may result.

As an expert on car care, your advice will be believed and appreciated. Besides bouquets, you'll win the job of draining and flushing the cooling system . . . refilling it with fresh water and rust inhibitor.

And while you're under the hood, look around for signs of winter-time wear and tear. Check *all* cooling system parts—radiator cap, hoses and hose connections, water pump—then, look around for other potential trouble spots.

If you find any, tell your customers about them. It's the surest way to win confidence—and increase your profit.

UNION CARBIDE CHEMICALS COMPANY

Division of Union Carbide Corporation
 30 EAST 42ND STREET, NEW YORK 17, N. Y.





"Me? I'll take Monmouth* bearings!"

**there's a size and
type for every job"**

From your N.A.P.A. jobber you can quickly get Monmouth Micro* or Clevite* 77 engine bearings . . . the *complete* line . . . precision and performance engineered for *every* car, truck, bus or tractor. While you're there, ask him for a free copy of the helpful, 100-page "Mechanic's Engine Bearing Reference Manual."

*Your N.A.P.A. jobber
is a Good Man to Know!*



*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation.

Monmouth

ENGINE BEARINGS

CLEVITE SERVICE

The Cleveland Graphite Bronze Co.
Division of Clevite Corporation
Cleveland 3, Ohio, U.S.A.





POWER TIP as Chrysler '57 Mobilgas

Victory is further proof
that POWER TIP design gives
better initiation of combustion
for top performance and
economy at all speeds

The 1957 Mobilgas Economy Run gives dramatic evidence of Power Tip's ability to give top performance and top economy in all kinds of driving. For 1568 miles, in the mountains, on the highway, and in city traffic, Power Tip sparked every winner to victory. Here's how Auto-Lite Power Tip operates to give this outstanding performance.

In today's overhead-valve engines, you can't win the battle of combustion from the "sidelines." The projecting ceramic tip—the Power Tip—extends the spark gap inward toward the center of the combustion chamber. Ignition takes place closer to the heart of

the fuel mixture, and fuel burns more evenly and completely with these results . . .

At *low speeds*, the projecting Power Tip gets hot fast, operates hotter to burn away fouling deposits which impair engine performance in city driving. At *high speeds*, the Power Tip is actually cooled by the richer air-fuel mixture to check power-wasting pre-ignition caused by overheated spark plugs. Power Tip "fires up" at *all speeds*!

Power Tip is available for all overhead-valve V-8's and for most overhead-valve 6-cylinder engines in all of America's 18 makes of passenger cars.

THE ELECTRIC AUTO-LITE COMPANY • TOLEDO 1, OHIO

RUGGED TEST SUPERVISED BY IMPARTIAL ORGANIZATION



The Mobilgas Economy Run, sponsored annually by Socony-Mobil, is rigidly supervised by observers provided by the Sports Commission of the United States Auto Club. Observers in every car make sure that cars operate at legal speeds, are never coasted, and observe all traffic laws.

LOW PRICE CLASS



Won by a PLYMOUTH BELVEDERE V-8,
driven by Mary Davis. 52.6211 ton-
miles and 21.3907 miles per gallon.

LOW MEDIUM PRICE CLASS



Won by a DODGE CORONET 500 V-8,
driven by William J. Losher. 55.8920
ton-miles and 22.0047 miles per gallon.

UPPER MEDIUM PRICE CLASS



Won by a CHRYSLER SARATOGA V-8,
driven by George Alsbury. 56.7267
ton-miles and 20.7032 miles per gallon.

"fires up" all winners -built cars sweep Economy Run

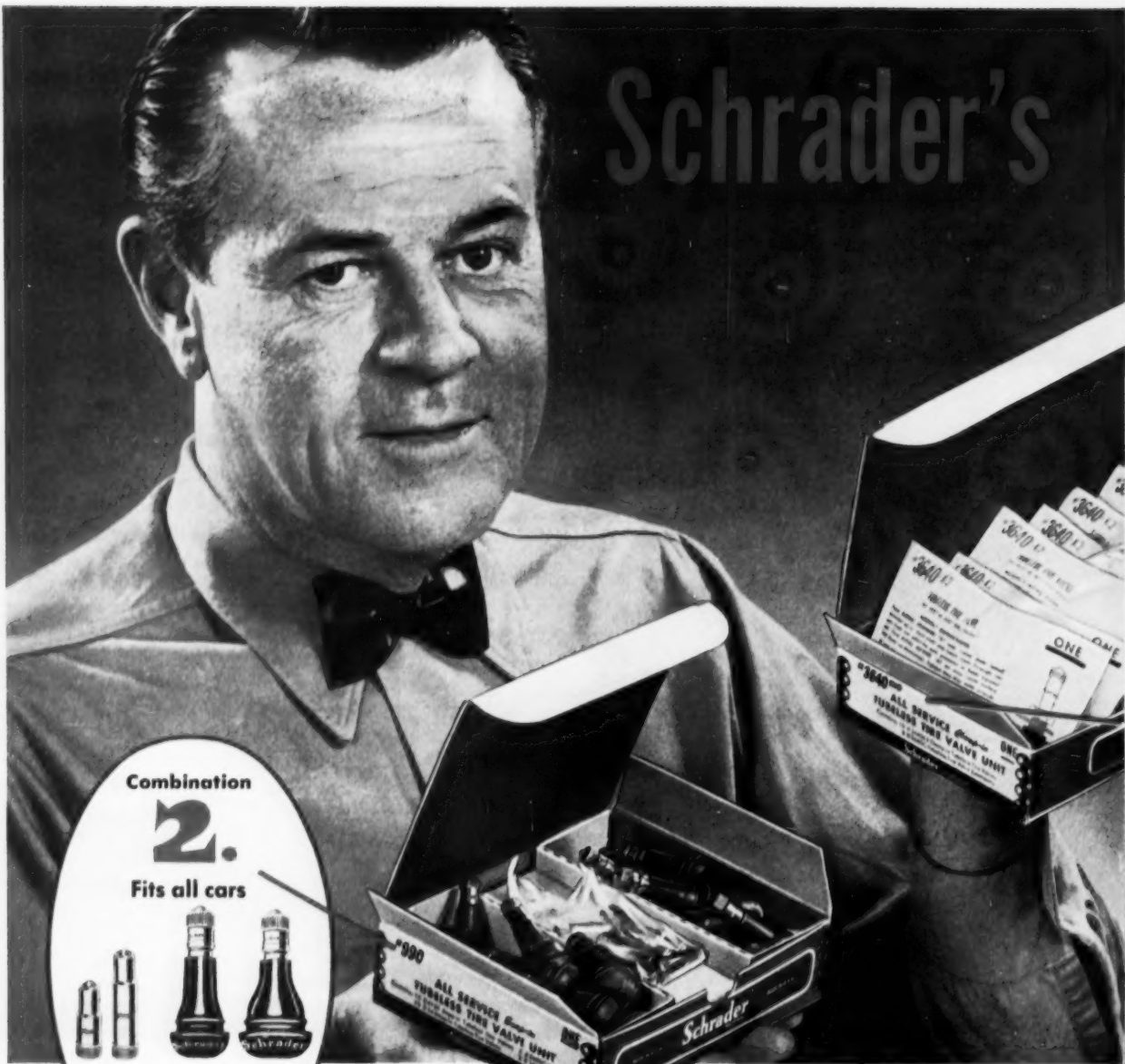


AUTO-LITE®

RESISTOR SPARK PLUG WITH

POWER TIP

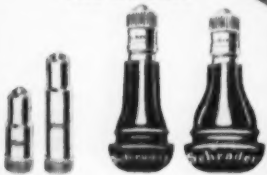
Schrader's



Combination

2.

Fits all cars

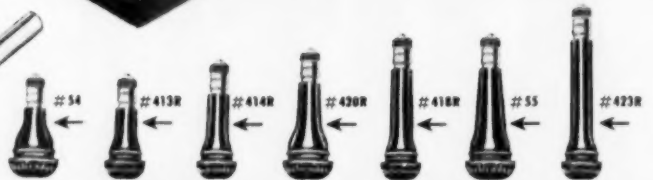


413R Valve for .453" and
54 Valve for 1/2" rim holes,
with ## 3680C or ## 3680G
Extension.

NEW TUBELESS SNAP-IN
VALVE MOUNTING TOOL



992 FOR ALL TUBELESS
VALVE LENGTHS ON ANY RIM



7 SIZES OF TUBELESS VALVES USED ON 1957 MODEL CARS

NEW! FOR 14" TUBES!



Replacement Valve . . . and Valve Fishing Tool
for .453" and larger rim holes.

Schrader®
a division of **SCOVILL**

new tubeless tire valve inventory savers



Combination

1.

Fits
95% of
all cars



#3640K2 Valve with washers
for .453" and 1/4" rim holes,
and #3680C Extension.

Your choice of these tubeless tire valve combinations serves all sizes of the tubeless tires you stock

COMBINATION #1. New All Service Clamp-In Type Tubeless Tire Valve Package. This inventory saver package unit reduces tubeless tire valve stocks to an absolute minimum. Ten Schrader Clamp-In Type Valves and five Extensions . . . the right combination to fit any ten Tubeless Tires you stock to various tubeless equipped cars rolling today. Extensions adjust the valve lengths to fit 95% of rims—where special ornamental covers are used. Order Schrader Unit No. 3640K-10 today.

COMBINATION #2. New All Service Snap-In Type Tubeless Tire Valve Package. Services 100% of all passenger cars regardless of rim hole size, tire size, make or model of car, and type of rim cover. Contains two sizes of easy-to-install Schrader EZE-MOUNT Snap-In Valves (ten of each) and seven Valve Extensions to adjust valve lengths. Here is the package unit that eliminates your tubeless tire valve stock problems. . . . Order Schrader Unit No. 990 from your supplier today.

Or if you stock tires for one or two car models—specially—Schrader packages each of the seven original equipment valves separately in boxes of 10 or 50.

Plus NEW Products for Complete Tube and Tubeless Type Tire Service

New Tubeless Tire Valve Mounting Tool (#992). Now you put in or remove Snap-In Valves . . . quickly and easily. Fits all rim widths and valve lengths—does the job right.

New Chuck Gauge with Added Safety Feature for Mounting Tubeless Tires. Includes chuck clip and three feet of hose as recommended by the Industry for safety. Saves holding onto valve, frees one hand. Single push button control of all three: gauging, inflating, and deflating. Practical for its extra safety.

Clamp-In Type Truck Tubeless Tire Valves. Schrader can provide you with Straight Type for side hole valve mounting, or with Bent Type for bottom hole valve mounting.

More new products include the new Valve Fishing Tool (#991) for guiding a valve smoothly through .453" and larger rim holes while mounting tire and tube on 14" and larger sized rims; and the new #13R Replacement Valve that fits the .453" rim holes found in 14" rims used on 1957 model cars.

FREE 17" x 22" full practice tubeless Wall Chart helps you pick the right valve to make your stocks fit!



REMEMBER! INSTALL A NEW VALVE WITH EVERY TUBELESS TIRE YOU MOUNT!

A. SCHRADER'S SON, 470 Vanderbilt Avenue, Brooklyn 38, N. Y.
Division of Scovill Manufacturing Co., Inc.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

PROTECT YOUR



**ALL WAGNER
PRODUCTS ARE
TOP QUALITY!**



WAGNER LOCKHEED HYDRAULIC BRAKE PARTS line is the most complete on the market. For example, Wagner Hydraulic Brake Cylinders are available in types for practically all makes and models of cars and trucks... 285 numbers of master cylinders and 411 numbers of Wheel cylinders. Available as cylinders only, or in Repair Kits. For details, see Catalog AU-1.

Wagner Lockheed
the best known name in brake service



GOOD NAME!

use **Wagner Lockheed** **HYDRAULIC BRAKE PARTS** ...identical to original equipment

You can safely stake your reputation on the performance of Wagner Lockheed Hydraulic Brake Parts...They are tops for quality, and they are dependable.

From the selection of raw materials to final packing, the quality of these brake parts is rigidly inspected and carefully guarded. Wagner does this so that you can provide your customers with the finest brakes available anywhere.

Wagner Lockheed Brake Parts—cylinders, pistons,

springs, washers, cups, boots, hose, etc., marketed for replacement needs are identical to original equipment. These parts are manufactured to the same specifications, by the same machinery, as Wagner-made parts used in complete assemblies for original equipment.

You'll find that the Wagner Lockheed line of hydraulic brake parts is the most complete on the market. Every make and model vehicle is covered. Parts are available individually or in factory sealed kits.

You can save time by getting all your brake service needs from one source



WAGNER LOCKHEED HYDRAULIC BRAKE FLUID is chemically balanced to function perfectly in all seasons and under all operating conditions.



WAGNER CoMaX BRAKE LINING is unsurpassed for quick, safe, smooth stops, and extra long service life. Available in sets, rolls, blocks, slabs, cut segments, and shoe exchange sets.



WAGNER SHOE EXCHANGE SETS are available with "bonded-on" or "riveted-on" Wagner CoMaX Brake Lining, with both standard and over-size lining thicknesses, for all popular cars and light trucks.

WAGNER LOCKHEED BRAKE PARTS,
FLUID AND LINING...AIR BRAKES...AIR HORNS...
TACHOGRAPHS...NOROL...ELECTRICAL PRODUCTS



Chilton's MOTOR AGE, JUNE, 1957

Wagner Electric Corporation

6408 Plymouth Ave. • St. Louis 14, Mo.
(Branches in principal cities in U. S. and in Canada)

Please send us Bulletin MU-411 on Hydraulic Brake Servicing.
We understand that there is no charge or obligation.

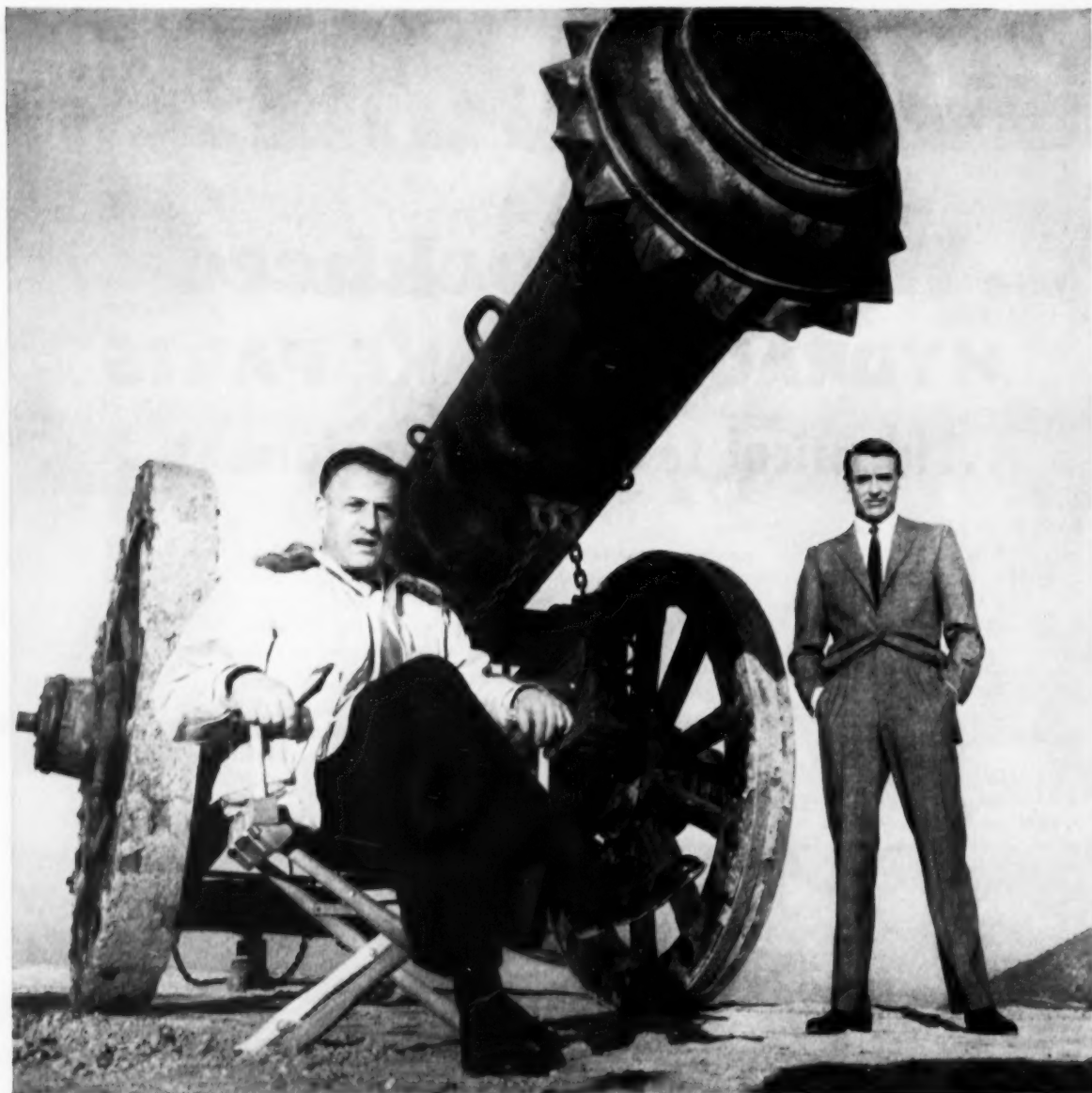
NAME _____

FIRM NAME _____

ADDRESS _____

CITY & STATE _____

P57-1



Stanley Kramer, Producer-Director, and star Cary Grant tell why:

"This shot will be heard around the world!"

"To shoot 'The Pride and the Passion' in Vista Vision and Technicolor — on location in Spain — was an enormous job. We lugged this 40-foot cannon over mountains — with the help of Frank Sinatra, Sophia Loren, and thousands of extras!

"It was tough work and a tough shooting schedule to meet United Artists' release date for the film!

"Without Air Express, we couldn't make it.

"We count on Air Express to pick up the cans of film in New York, rush them to Hollywood for processing and cut-

ting, fly them back for top executive screening.

"Then Air Express beats the release date by delivering hundreds of prints throughout the U. S. They speed up ground time with radio-controlled trucks — and even 'keep an eye on' all the shipments with their private teletype system!

"Surprising to me, with all this service, most of our shipments cost less than any other complete air service. 20 lbs., for instance, Hollywood, California, to Salt Lake City, Utah, is \$5.56. It's the lowest-priced complete service by \$1.94."



Air Express



30 YEARS OF GETTING THERE FIRST via U. S. Scheduled Airlines

CALL AIR EXPRESS . . . division of RAILWAY EXPRESS AGENCY

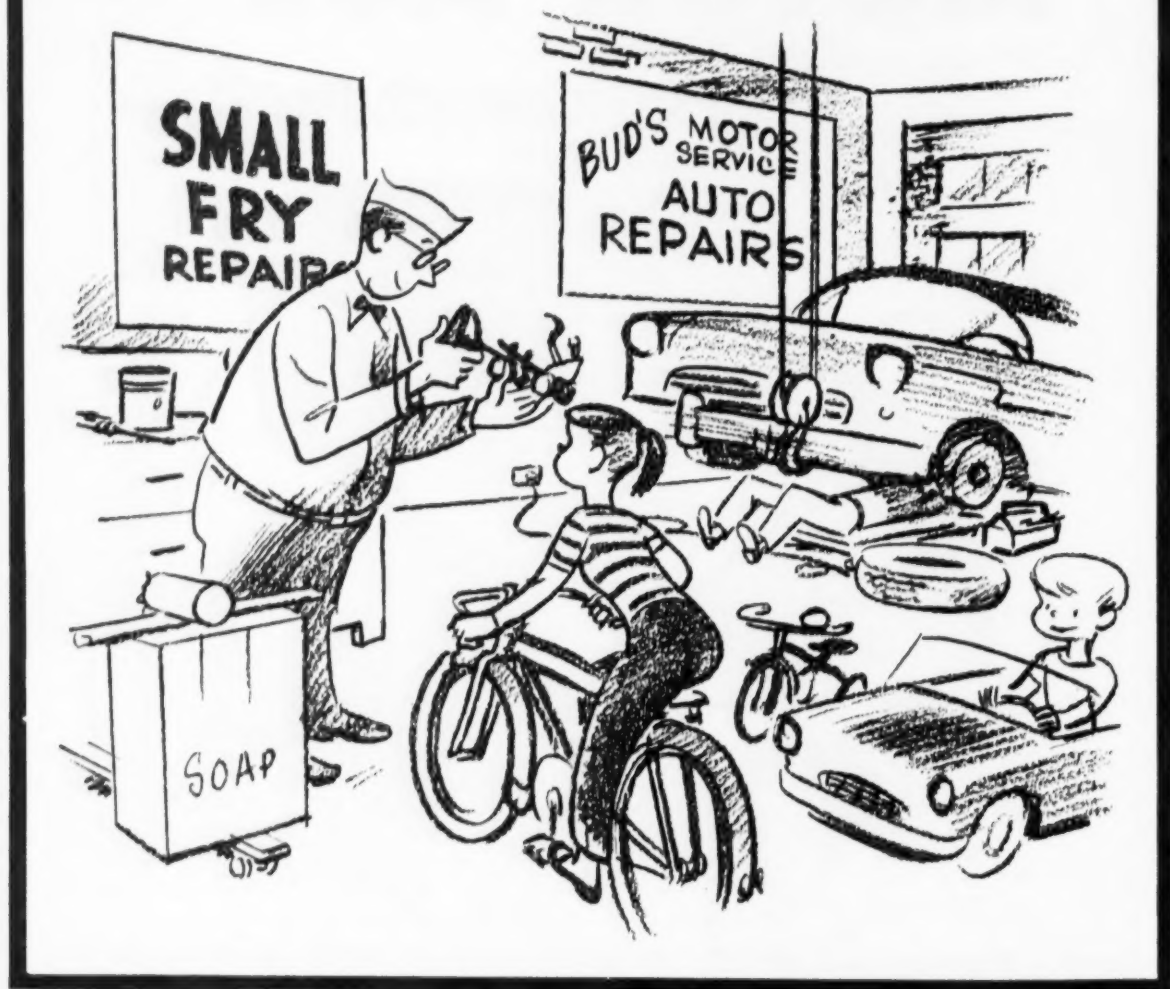
MOTOR AGE *Recommends*



**YOUR OWN VACATION WILL
BE RELAXING IF YOUR CAR
HAS A PRE-VACATION CHECKUP**

... Let your Automotive Serviceman do it today!

What makes customers come back for more?



They'll all come back if you give 'em the best. When it's a bearing job ... just tell 'em it's **TIMKEN®**!

A small fry repair shop might bring 'em in. But what car owners really want is car service. That means the best in replacement parts — and in bearings the best-known name is Timken®. When you're replacing tapered roller bearings, just let your customers know it's Timken! Car owners know that name means quality. To keep 'em

coming back always point to the trademark "Timken." The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO."

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL ○ NOT JUST A ROLLER □ THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST — LOADS OR ANY COMBINATION





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Vacations Mean More Work

JUNE marks the entering in, unofficially, of the great and glorious pastime of the American vacation. A vacation is a wonderful thing. A chance to let mind and body find a change of pace. A time to shift into neutral and rest the gears. An opportunity to explore new surroundings, new activities—even though hemmed in with a two-week deadline.

Somewhere in the neighborhood of 60 million Americans will take to the highways and byways this summer for their vacations. Most of them will be driving cars. Here's where you come in. Vacations should mean more work for your shop or service department. The automotive service specialist should be seriously concerned with getting these cars ready, fit, and able to travel SAFELY and COMFORTABLY to their destinations.

Preventive Maintenance more than ever springs to mind. What car owner wants a break-down of the family automobile on top of 'Old Smoky'? Or deep in the 'badlands'?

Your job, then, in June, and throughout the vacation season, is to sell, stress, and urge preventive maintenance—pre-vacation check-ups. Both you and your customer will be glad you did.

Down the Lane to Safety

THIS year's National Vehicle Safety-Check program again proved successful with more than 1,000 communities cooperating. Final figures are not in but should show that over two million cars and trucks made the voluntary trip "Down the Lane to Safety."

Encouraging news on the increasing public awareness of the voluntary check lanes is borne out by H. D. Tompkins, Chairman of the Inter-Industry Highway Safety Committee. Reports Mr. Tompkins: "This year's support of voluntary Vehicle Safety-Check programs by state and local officials and citizens makes it obvious that the public is 'Backing the Attack on Traffic Accidents.' Results will be felt in statistical columns and driving attitudes of the future."

Faithfully yours,

Frank Tighe

EDITOR



of course I use Pedrick Formflex rings

what else?

These are the rings to depend on for a stellar performance every time. The exclusive "Equalizer" makes Pedrick Formflex oil rings most conformable. Oil Waste is stopped without stopping necessary lubrication—in *any* engine. Chrome gives 2 to 4 times longer life. Be the "Ringmaster" in your community. Give your customers stellar performance in their engines with Pedrick Formflex Chrome Sets.

Pedrick

PISTON RINGS



WILKENING MANUFACTURING CO., Phila. 42, Pa.
IN CANADA: Wilkening Mfg. Co. (Canada), Ltd., Toronto

executive section Jobber

News NotesFrom the Editors

The Last—Hurrah

BOSTON MARKED THE END OF THIS YEAR'S Regional Shows. Tagged as the National Automotive Show, it was a great success. This was encouraging to manufacturers who have struggled through other Regional Shows without the same degree of success.

Officers Elected to MARA Show

THE FOLLOWING NEW OFFICERS have been elected by the membership of the Middle Atlantic Regional Automotive Show. President, Robert S. MacPherson, E. P. Rotzell Co., Phila., Pa.; vice president, Maury Boehm, Shapiro and Boehm Co., Jenkintown, Pa.; treasurer, W. E. McCullough, Jr., J. H. McCullough & Son, Phila., Pa.; secretary, Charles H. Bauer, Phila., Pa.; president emeritus, George B. Shearer, Jr., Gaul, Derr & Shearer Co., Phila., Pa. Preliminary work for the MARA Show in 1959 is now in the planning stage.

Fixed Minimum Wage Must Be Paid

PRODUCERS OF LEAD-ACID STORAGE BATTERIES now must pay a fixed minimum wage on government contract work. This amount, \$1.35 an hour, is the first minimum set for the industry by the U. S. Labor Dept.

ALSO FIXED IS A FIGURE of \$1.08 an hour for dry primary battery producers and \$1.34 for makers of other batteries. Rates were put into effect on May 27.

Outlook Good for Retailers

THIS SUMMER SHOULD BE A GOOD ONE for retailers, if spending keeps pace with hiring. A new high of 68 million persons will hold jobs during the hot months, forecasts James P. Mitchell.

THAT TOTAL IS MORE than 5 pct ahead of the 64.3 million who were employed back in April. Peak figure last year was the 66.5 million working in August.

Engine Rebuilders Hold Convention

THE 35TH ANNUAL CONVENTION of the Automotive Engine Rebuilders Association was held at Detroit, May-12-15. At the business session new by-laws were ratified and the following officers were elected for the ensuing year: President, Fred A. Lambert, Lambert Co., Ltd., Los Angeles, California; 1st vice president, Leonard Connett, Piston Ring Service Co., New Orleans, La.; 2nd vice president, Franklin C. Bradley, Jr., Connecticut Bearing Co., New Haven, Conn.; treasurer, Chas. W. Yount, Eagle Machine Company, Indianapolis, Indiana (reelected).

THE 1958 CONVENTION of the Association will be held at the Sheraton-Park Hotel in Washington, D. C., May 11, 12, 13 and 14.

Body Suppliers Organizing

A VERSATILE GROUP OF MANUFACTURERS who sell tools, equipment, paint, and supplies, plan to organize. An informal meeting last month "kicked off" the move. It began with a meeting in Detroit in April. Its next organizational meeting will be in October.

THE ASSOCIATION is tentatively called the Auto Body Refinishing Equipment and Suppliers Association. A suggestion for a more simplified title was the Automotive Refinishing Institute.

Tire Prices May Go Up

TIRE PRICES MAY GO UP AGAIN. Expected wage boosts at major rubber companies this summer, plus higher transportation and material costs, may push carcass prices up at least 5 per cent.

U. S. ECONOMY



Sales by Retailers Up

SALES BY RETAILERS IN THE AUTOMOTIVE LINE were heftier by \$30 million in April than in March. Government summaries, without any juggling for seasonal factors list sales of more than \$3.3 billion in each of these months.

COMPARED WITH APRIL 1956, sales in April this year were nearly \$300 million higher. Amount of sales for retail stores of all types in April was close to \$16.3 billion.

Why and Where to Trim Taxes

TAX-CUTTING ARGUMENTS WERE TO LAST until mid-June before the Senate-House Economic Committee. Numbers of businessmen, tax experts, and federal officials were to have their say on why and where taxes should be trimmed.

A STRONG PLEA FOR LOWER RATES for individuals was expected. There's little or no chance for reduced rates for business corporations.

OPERATION

JOBBER

Keeping direct mail lists in shape

DIRECT Mail Advertising is a natural advertising medium for automotive jobbers. Most all jobbers use it in one form or another, a large number with spectacular results. Others have only mediocre success. Principally because they either do not understand direct mail advertising theory and practice or they fail to use it consistently.

Some of the many advantages of direct mail advertising are:

1. Ease of preparation—a "Do it yourself operation" in cooperation with suppliers and local printers.
2. Flexibility as to timing—weekly, monthly, seasonally.
3. Low preparation cost.
4. Comparatively low postage cost.
5. Personalized messages to customers or prospects of your own selection.
6. Great variety of types—folders, letters, house organs, samples, catalogs, cards, etc.

There is nothing mysterious or difficult about the preparation of a good mailing list, the foundation for any successful mail

campaign. All you have to do is pick the names from your customer ledger file and prospect file, not forgetting, of course, the important customers who pay cash. Also, you can cross check through your customer order file for a few years back to make sure inactive names are added to the list.

A further step is to contact a commercial list company and the local telephone directory. Then check this list with the names compiled from your own records and you will have an A-1 mailing list.

After the above steps have been taken, it is advisable to break the list down for each salesman's territory. Ask the salesmen to check each name for: 1. Authenticity; 2. Correct spelling; 3. Right address; and 4. Postal Zone Number.

Don't overlook the last step in building your mailing list. It certifies the names of both customers and prospects and, at the same time, makes it necessary for your salesmen to call on prospects they may not have previously contacted.

List Maintenance

While mailing list maintenance is not difficult, it is de-

tailed enough to require the personal attention of some *one* person in your organization, preferably the person selected to supervise your advertising. A great deal of money can be lost if the list is not properly cared for and operated.

All mail should bear your *complete* address with "Return Postage Guaranteed." This provides for the return of undeliverable mail because of death, out of business and other reasons.

Another excellent way to keep your mailing list up to date, is to provide your salesmen with a sample form which they fill out every time they call on a new prospect. This form should also be filled out each time a regular customer or prospect changes his name or address.

Most mailing lists used by automotive jobbers are divided into various classifications best suited to the individual operation and for the sake of economy.

Once an automotive trade list has been prepared, properly classified and the maintenance machinery set up, it can become a great business asset and the backbone of an effective and profitable direct mail advertising program.

signs of the times



EDWARD GAMMIE



JOHN REYNOLDS



JAMES WHEATLEY

NSPA Selects New Officers

Edward Gammie, vice president, Victor Manufacturing and Gasket Company, Chicago, was elected President of the National Standard Parts Association at the closing session of its 33rd annual convention in Boston last month.

John Reynolds, vice president, Strauss-Frank Company, automotive wholesaler of Houston, Texas, was named Senior Vice President, and James A. Wheatley, sales manager, Grey-Rock Division of Raybestos-Manhattan, Inc., Manheim, Pa., Junior Vice President.

Named to the Board of Directors for a three-year term were C. Edward Hout, executive vice president, Keenan Auto Parts Company, Albany, Ga.; Max W. Pollard, Stickney's, Inc., Sterling, Colo.; Howard B. Weaver, president, Featherstone's Inc., Los Angeles, Calif.; E. W. Wind-

sor, general manager, Automotive Division, The Sherwin-Williams Company, Cleveland, Ohio; T. C. Parriott, sales manager, Zerone and Zerex Sales, E. I. DuPont de Nemours & Company, Wilmington, Del.; M. S. Bandoli, vice president,

Marketing and Distribution, Pendleton Tool Industries, Inc., Los Angeles, Calif.

Roger S. Heidenheim, sales manager, McQuay-Norris Manufacturing Company, St. Louis, Mo., was elected board member for a one-year term.



By proclamation, Massachusetts Governor Foster Furcolo (center) welcomed last month's National Automotive Service Show held in Boston. At left is Maurice W. Persson, Show president; and Paul R. Lavine, Show board of directors chairman and NSPA regional vice president is at right.

Donald Teetor New PC Board Chairman

Donald H. Teetor, vice president of Perfect Circle Corp. for the last 11 years, was named chairman of the board, succeeding his brother Lothair Teetor.

Perfect Circle's directors also elected William B. Prosser to



W. D. PROSSER



D. H. TEETOR

succeed Ralph R. Teetor as president, and Herman C. Teetor to succeed Donald H. Teetor as a vice president of the Company.



H. C. TEETOR

Daniel C. Teetor, vice president and George Rea, secretary-treasurer.

Lothair Teetor is retiring from the chairmanship, which he has held since 1946, but will continue as a director of the Company. Ralph Teetor, retiring president, will also continue as a director and will maintain an active association with the business, devoting his attention to new product development projects.

Donald H. Teetor, the new board chairman, has been a vice president of Perfect Circle since 1946. One of four sons of Charles N. Teetor, Perfect Circle's second president, he joined the Company in 1926.



Representatives to the automotive trade for Krylon, Inc., of Norristown, Pa., attending annual sales meeting in New York City. Left to right: James W. Bampton, president of Krylon, Inc.; Harry Paston, Bert Crasner, Daniel Scharf, Neil Hunter, Jack Hildreth, Harold White, Morton Greenberg, Roy Cantell, Harry Ruben, Richard C. Newbold, Jr., vice president-sales for Krylon; Richard Hagberg and William Baker.

Beninato to Head MEWA Young Execs

During the 1957 annual meeting of the Young Executives Group of the Motor and Equipment Wholesalers Association, announcement was made that Philip R. Beninato was elected Group Chairman. He succeeds Edmund Kleinschmidt.

Besides Beninato, who is sales manager for Official Distributing Corp., New York City, the Young Executives Group has named G. Norman Herberg as Group Secretary. Herberg is vice president of Herberg Auto Service, Burlington, Vt.

Liquid-Cooled Raybestos Brake

Latest development in brakes for passenger cars comes from Raybestos-Manhattan. Liquid-cooled, the brake is said to completely eliminate heat buildup. Heat is dissipated by liquid from

the engine cooling system which is channeled through tunnels in copper linings fused to a variation of conventional brake shoes.

The copper linings contact conventional brake drums lined with special friction material. The company says tests indicate the brake will last for 100,000 miles.



William S. Simpson, Vice President and General Manager of Raybestos compares the new copper lined, liquid-cooled brake shoe with the conventional shoe and lining he is holding in his left hand.

Saks Presents Copy Of Marketing Book

In April, the Subcommittee on Distribution Problems of the Select Small Business Committee of the House of Representatives held hearings in Washington on the problems of distribution in the petroleum industry. The Subcommittee Chairman, Congressman James Roosevelt, presided over these hearings.

Attorney Harold Halfpenny, Mr. Robert Phelps and Mr. Ira Saks testified at these hearings on the subject of coercive practices in the sale and distribution of TBA merchandise.

At the conclusion of these hearings, Mr. Saks, the Treasurer of the Automotive Service Industries Committee, presented to Congressman James Roosevelt a copy of the book entitled, "The Marketing of Automotive Parts."

This book, by Professor Chas. N. Davisson, is the result of a very exhaustive two-and-a-half



Looking over the presentation copy of "The Marketing of Automotive Parts" are (left to right) Harold Halfpenny, Ira Saks, and the book's recipient, Congressman James Roosevelt.

years' study by Professor Davisson and the Marketing Staff of the University of Michigan. The book depicts various methods and means of distribution of automotive parts and accessories in the Automotive Service Industry.

This study was initiated as a result of a grant of a very substantial sum by the Automotive Service Industries Committee to the University of Michigan. Mr. Don Teetor of Perfect Circle Piston Ring Company is Chairman of this Committee.

AC Spark Plug New Promotions

A series of sales, advertising and merchandising executive changes in the AC Spark Plug Division of General Motors were announced recently by E. H. Francois, general sales manager. The appointments took effect May 1.

O. Franklin Frost, general merchandising manager, has been promoted to the new post of assistant general sales manager.

William C. Lee and Paul P. Trainor, assistant sales managers, have been advanced to eastern sales manager and western sales manager, respectively.



E. F. Herman was recently awarded the Shattuck Trophy, presented annually to Walker Manufacturing Co.'s most outstanding district wholesale sales manager. At award ceremonies were (left to right) W. W. Hardy (1955 trophy winner); Walker president Rea I. Hahn; W. E. Rapp, wholesale sales manager; Herman (who won trophy also in 1953); and R. E. Archer, field sales manager.

Industry Meetings

June 20-23—Independent Garage Owners of America, National Convention, Toledo.

Sept. 12-14—Automotive Parts Rebuilders Association convention and trade show, Congress Hotel, Chicago.

Sept. 23-26—Automotive Advertisers Council fall meeting, St. Clair Inn, Detroit.

Oct. 17-19—Automotive Wholesalers of Texas Convention and Booth Conference, Hilton Hotel, San Antonio.

Nov. 2-4—Automotive Wholesalers Association of Louisiana convention and booth conference, Jung Hotel, New Orleans.



These sales representatives and executives of Grizzly Manufacturing Division from coast to coast gathered recently in Paulding, Ohio for the company's general sales meeting.



Steven B. Wilson, chairman of the board of directors of the Fram Corporation, left, and City Commissioner J. T. Waggoner of Birmingham, Ala., are checking a new carburetor intake silencer and air filter from the first production run at opening ceremonies of Fram's new plant in Birmingham.

Automotive Wholesalers' Sales and Inventories

Data from Bureau of the Census, Department of Commerce

Region	Sales			Inventories	
	Per Cent Change				
	Mar. 1957 from Mar. 1956	Mar. 1957 from Feb. 1957	3 Mos. 1957 from 3 Mos. 1956	Mar. 1957 from Mar. 1956	Mar. 1957 from Feb. 1957
Middle Atlantic	- 4	+ 7	+ 6	+16	+ 6
East North Central	0	+ 1	+ 8	- 7	- 6
West North Central	+17	+11	+13	+ 7	+ 2
South Atlantic	+ 1	0	+ 3	+ 9	+ 2
East South Central	+ 4	+ 4	+10	+ 5	0
West South Central	- 8	+ 6	+ 2	+ 9	+ 2
Mountain	- 9	-14	+ 8	+ 9	+ 2
Pacific	0	+19	+ 1	+ 3	+ 3
United States	0	+ 7	+ 7	+ 6	+ 1

Indicators of Business Activity

These figures are based on latest thirty-day reports

	Latest Data	Month Before	Year Ago	Percentage Change from—	
				Month Ago	Year Ago
PRODUCTION					
Motor Vehicles (Units)	654,851	579,105	647,984	+13.1	+ 1.1
Industrial—F. R. B. 1947-'49=100 (Adj.)	145	146	143	- 0.7	+ 1.4
SALES					
New Cars	550,000	572,917	564,272	- 4.0	- 2.5
Replacement Tires (Units)	5,579,212	5,051,465	5,034,138	+10.4	+10.8
Manufactures (\$ Millions)					
Durable Goods	\$14,470	\$14,726	\$13,294	- 1.7	+ 8.8
Non-durable Goods	\$14,463	\$14,404	\$13,801	+ 0.4	+ 4.8
Department Stores, 1947-'49=100	122	127	122	- 3.9	None
GENERAL					
Consumers' Price Index, 1947-'49=100	118.9	118.7	114.7	+ 0.2	+ 3.7
Civilian Employment	64,261,000	63,865,000	63,991,000*	+ 0.6	+ 0.4
Unemployment	2,690,000	2,882,000	2,564,000*	- 6.7	+ 4.9

* Not strictly comparable with 1957 data.

Motor Age's Who's Who



Jonathan Kludt has been elected executive vice president and general manager of the Lincoln Engineering Company by the board of directors of The McNeil Machine & Engineering Company, Akron, Ohio.

Samuel Melvin Chesney has been elected vice president of the Commercial Credit Company.

Lewis Fieger has been appointed service manager of the Automotive Department of John Bean Division, Food Machinery and Chemical Corporation.



J. C. Hamilton has been appointed general manager of Allied Motor Parts Company, Detroit, effective March 1, 1957. He was formerly associated with Perfect Circle and had been with Automotive Gear Works, Inc., as vice president in charge of sales.

E. C. Messervey has been appointed Chicago branch manager and Northern Illinois division manager of the Arolube Division of Aro Equipment Corporation.



Sydney M. Cowan has been appointed advertising manager of United Motors Service Division of General Motors Corporation. Cowan has been in the division's advertising department for the past nine years.

Willard B. Paine was elected executive vice president of Bendix-Westinghouse. **I. F. Richardson** has been named to succeed Paine as general manager of the Kansas City division. **Eldred E. Evans** has been promoted to assistant general manager of the Bendix division.

Joseph C. Duke and **Bert S. Cross**, vice presidents of Minnesota Mining & Manufacturing Co., were elected to the firm's board of directors.



H. Joseph Markert, left, has been appointed president and **Justus P. Nesbitt** appointed vice president and general manager of Industrial Wire Cloth Products Corporation, Wayne, Michigan.



John M. Robinson, left, was elected executive vice president and **John M. Ehni** was elected vice president of foreign sales of the DeVilbiss Company, Toledo, Ohio.



John O. Green, Jr., director of industrial relations and assistant secretary of the Permacel Corporation, New Brunswick, N. J., has been appointed to the board of directors.

James C. Laney has been appointed manager of the automotive products department of the Industrial Chemicals Division of Olin Mathieson Chemical Corporation. He succeeds **W. Adrian King**, who has been named general sales manager of Industrial Chemicals Division.



Albert Setzer, Jr., has been named district sales manager by Willard Storage Battery Division to cover Florida and Southern Georgia.

William J. Hogan has been appointed a sales representative for Maremont Automotive Products, Inc., to take charge of the company's Sacramento, California, territory.

John W. Puth has been appointed advertising manager for Purolator Products Inc., Rahway, N. J. Puth will assist the merchandising manager in the supervision of advertising, public relations and sales promotion activities.



Stanley W. Koenig has been promoted to director of advertising for Olin Mathieson Chemical Corporation.

Rex L. Curry has been appointed regional sales manager in the Original Equipment Sales Division which is a subsidiary of the Walker Manufacturing Company of Wisconsin in Racine.



'58 Chicago Auto Show
Companies Jockey For Lead
More About Brake Fluids
Remote Controlled Auto
Chrysler's Fuel Injection
Smaller AMC Cars In '58
Imperial Sales Triple

Chicago Bids for Largest Show

THE BATTLE OF THE AUTOMOBILE SHOWS IS ON. Not to be outdone by the New York national show, the Chicago dealers association is considering expanding its extravaganza next year, for a splurge of its golden anniversary.

PLANS ARE TO LEASE an additional 150,000 sq ft of space in the Amphitheater, which would bring total space to 450,000 sq ft. The New York show last year occupied about 300,000 sq ft. At present, there are no indications as to whether space will be expanded for the next show, for which no date has been set yet.

Ford and Chevrolet Jockey for Lead

FORD'S SALES LEAD SO FAR THIS YEAR does not dim hopes of Chevrolet officials for recouping the No. 1 spot this year. Neither is any Detroit observer making any wagers as to the ultimate outcome at the finish line this year. Sales race between the two so far has been surprisingly close, with Ford holding a lead of about 25,000 units at last count, which represents a week's production.

CHEVROLET OFFICIALS POINT to the fact that although Ford held the sales lead during the first five months of record 1955, Chevrolet overtook Ford at mid-year and captured first place at year's end.

More About Brake Fluids

LAST MONTH, MOTOR AGE REPORTED the Society of Automotive Engineers' announcement that only heavy duty brake fluids are safe in most 1955, 1956, and 1957 cars. It is interesting to note as a sidelight that seven of the nine states with brake fluid laws, already require heavy duty 70-R1 or R-71 fluids.

ALSO AS FAR AS SALES WENT in 1956, heavy duty brake fluids represented 55.5 per cent of the 9½ million gallons of brake fluid sold. This year percentage of heavy duty brake fluid sales should go higher.

Remote Control Automobiles

REMOTE CONTROL AUTOMOBILES may still be a long way in the future, but when they do become a reality many firms will be prepared for the eventuality. Lear, Inc., of Grand Rapids, Mich., has developed a push-button control system which can automatically start engines, steer, shift gears and brake vehicles.

SYSTEM ALREADY HAS been tested in Marine Corps landing operations in which vehicles were landed on beaches via remote control. Helicopter and beach towers were used to control the landing craft.

New Type Front Axle

WHETHER ANY NEW DEVICE WILL replace power steering on automobiles is questionable at this time. However, some exploratory work along that line is now being carried out by one car company, which is testing a new type of front axle which reportedly accomplishes the same thing as power steering, and more.

THE AXLE, NOW OFFERED by some truck makers as an optional item, is said to provide much greater safety, easier steering, and reduced tire wear. During a recent demonstration a tire on a truck equipped with the axle was blown out with a 12-gauge shotgun. The vehicle was traveling about 50 miles an hour. Although the tire collapsed, the truck proceeded in a straight line without swerving and with the driver's hands off the steering wheel.

Chrysler Ready with Fuel Injection

RELIABLE REPORTS INDICATE CHRYSLER definitely is ready with a fuel injection system for 1958. It will be the Bendix electronic job.

CHRYSLER INITIALLY PLANS to install the unit on the "300." Probably for dealer use only to get manufacturing and service experience. Others, including Ford, also will get into the act, on a limited basis. High cost will tend to keep fuel injection confined to more expensive cars for some time to come.

Popularity of Ranchero Grows

FORD'S SUCCESS WITH ITS STYLISH PICKUP TRUCK, the Ranchero, is prompting other truck builders to look at this market. At least one other company is studying the potentials for such work-pleasure vehicle. Production of the Ranchero currently is running beyond expectations. It may exceed original goal of 25,000 for the 1957 model.

Attention Given Aluminum Brake Drums

ALUMINUM BRAKE DRUMS are getting more attention and may be used on at least one more make next year. Buick is only car company offering them at present—on the recently-introduced, plush "Roadmaster 75."

WEIGHT REDUCTION and greater heat dissipation are the two biggest advantages of aluminum brake drums.

Registration Figures for First Quarter

PRELIMINARY REGISTRATION FIGURES for the first quarter show the sales ground Chrysler and Ford have gained at the expense of General Motors. GM's share of the sales pie during the first three months tumbled about 6 per cent. To approximately 46 per cent from more than 52 per cent a year earlier.

CHRYSLER ROSE 19 PER CENT compared with about 16 per cent in the first 1956 quarter. Ford picked up nearly four percentage points, climbing to slightly over 30 per cent from 26 last year. American Motors' share of the market declined only slightly, from 1.9 per cent to 1.7 percent, while S-P dropped about one per cent, from 2.1 per cent to 1.1 per cent.

AMC's 1958 Models to Be Smaller

AMERICAN MOTORS IS GOING ALL OUT with small cars next year. Although AMC definitely will come out with what it describes as a "senior line" of cars, the 1958 versions will be considerably smaller than current models. They will be built on a 112 inch wheelbase chassis, more than nine inches shorter than current models.

THUS, THE 1958 VERSIONS of the Nash and Hudson will actually be only four inches longer in wheelbase than the Rambler, which will remain on its present 108 inch wheelbase chassis.

LATE NEWS FLASH AS THIS WENT TO PRESS says that American Motors is also planning to bring out a 100 in. wheelbase Rambler.

New Type Conductive Film

NEW TYPE OF ELECTRICALLY CONDUCTIVE FILM for aircraft windshields may sometime in the future be adapted to automobiles and trucks to keep windshields free from ice and fog. The new type of film, applied to glass, makes it sufficiently conductive. It permits warming current to be passed, while retaining high transparency.

Imperial Sales Triple

RETAIL DELIVERIES OF CHRYSLERS AND IMPERIALS during April were 25.2 per cent ahead of the 10,757 units delivered during April 1956. Imperial deliveries during the month, totalling 3663 units, were up a whopping 321 per cent.

Washington Wire



Alarming Growth in Federal Taxes

ALARMING GROWTH IN THE AMOUNT taken in for federal taxes is described by the U. S. Chamber of Commerce. Before June 30, 1958, the Eisenhower Administration will have collected \$373 billion in taxes. That's even more than the \$342.2 billion in tax revenue under the Truman Administration, 1945-53.

AND, THE CHAMBER ADDS, the Truman Administration collected more than all the administrations that came before it.

More Cars for Fewer People

PASSENGER VEHICLES DRIVEN BY THE U.S. military are going up in number, while the size of the armed forces drops off. There are about 600,000 fewer men in uniform than in 1955, but the proposed number of cars for the year ahead is a little higher.

CONGRESS WANTS TO KNOW WHY it's necessary to have more motor vehicles for fewer people. It asks the Defense Dept. to survey its vehicle needs to find if the fleet can be trimmed.

Tests Results of Head-on Collisions

HEAD-ON COLLISIONS WILL WRECK 25 CARS in new tests of what the human frame undergoes in an auto accident. University of California at Los Angeles is running the tests under an Air Force contract.

CORNELL UNIVERSITY HAS REPORTED to Congress on its own detailed studies of car crash injuries. Researchers decided safety belts, especially those with shoulder harness, can make the difference between a slight and a fatal injury.

Speak Up on Road Projects

LOCAL BUSINESS LEADERS OUGHT TO SPEAK UP at state highway department hearings on road projects. They can in this way help their cities to get better streets and highways, the American Automobile Assn. counsels.

OFTEN THE PUBLIC HEARINGS are best attended by persons who oppose the projects being discussed. The AAA calls on those who favor improved roads to make sure the record will contain their views.

Interest-Free Credit Lure

LATEST OF THE LURES THOUGHT UP BY THE MILITARY for attracting trade away from retailers is interest-free credit. A year-long test of this device is being set up at Air Force base exchanges at a California and an Ohio base.

SERVICEMEN MAY OPEN EITHER a 30-day charge account or a six-month deferred payment account. Barring a gross misuse of credit privileges, the trial run should be successful--for the armed services.

Permanence of SBA at Stake

CONGRESS IS GIVING AN EAR TO THE PLEA that the Small Business Administration be made permanent. Many of the lawmakers agree with President Eisenhower that small firms benefit by the SBA lending and advisory services.

ONE POINT THE CONGRESSMEN debated in May was the top interest rate the agency should require. Some argued for 6 pct, some 5 pct, and others wanted the going rate in the area where the loan is made.

Hope for Federal Flood Insurance

HOPE FOR FEDERAL FLOOD INSURANCE this year for business and home property owners is revived by the Senate. It voted in May to let the Federal Flood Indemnity Administration have \$14 million.

ALL OR MOST OF THIS \$14 million would be enough to start insuring, as the FFIA sees it. But the House voted nothing, and House and Senate must agree on how much, if anything, the agency actually will get.

Shopping Centers Keeping Land in Reserve

LARGE NUMBERS OF THE NATION'S SHOPPING CENTERS are keeping land in reserve so that they can expand. They're not forgetting the need for parking spaces either, the Urban Land Institute reveals after surveying 163 centers.

AVERAGE NEIGHBORHOOD CENTER has space for 363 cars, the ULI finds. A community shopping center can take care of an average of 1,300, and the average regional can park more than 4,000.



Sam Hanks sits in the car he drove to victory. Upper right photo shows actual start of this year's "500".

Report from Indianapolis

HANKS TAKES "500"

By J. K. MONTGOMERY, Technical Editor

POPULAR veteran driver Sam Hanks finally did it. Took the victory crown for the Indianapolis "500." Driving the Belond Exhaust Special built by George Salih, Sam scooted around the Speedway track on Memorial Day this year at the average speed of 135.601 mph. This set a new track record that eclipsed by about 7 mph last year's winning time of Pat Flaherty. Hanks' time also shattered the late Bill Vukovitch mark of 130.840 mph.

Sam, who led the pack for 141 of the 200

lap grind, flashed past the checkered flag a scant 23 seconds in front of Jim Rathmann. Rathmann averaged 135.420 mph. He drove the Chiropractic Special. Third place went to Jimmy Bryan (134.238 mph) in the Dean Van Lines Special. Paul Russo, who earlier had won the MOTOR AGE trophy for posting the fastest qualifying lap (145.255 mph), sped the Novi Air Conditioner Special across the line in fourth place. Andy Linden in the McNamara Special was fifth with an aver-

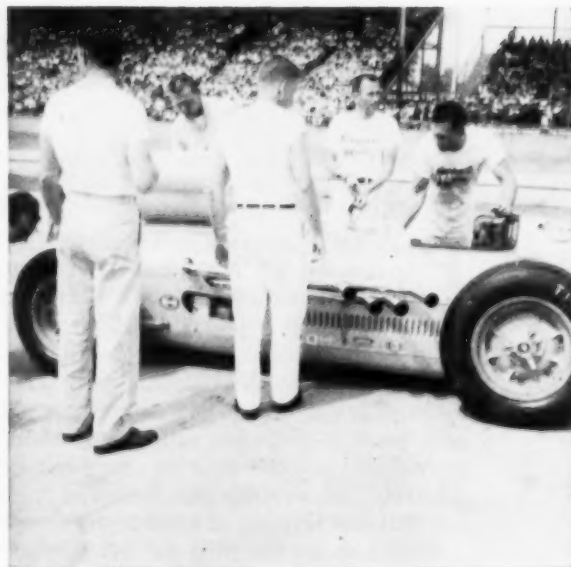
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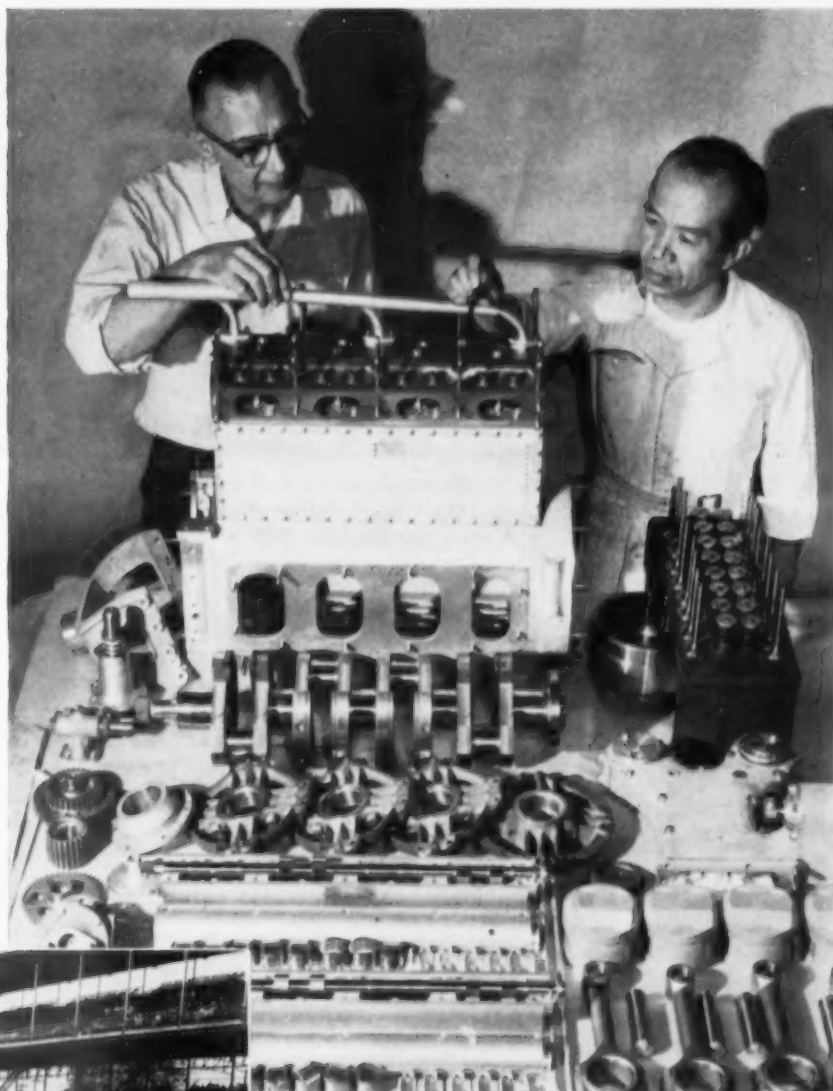


A. J. Watson, mechanic of the winning cars in 1955 and 1956, holds fiberglass tail assembly for the new John Zink Special.

Before the epic grind of 200 laps, there is a great deal of preparation and care by all concerned. Here are some candid of the pre-race activity.

INDIANAPOLIS SCENES





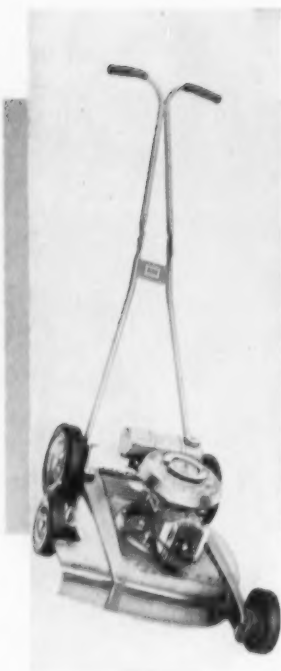
Dis-assembled Meyer and Drake 255 cubic in. race car engine.



Far left: Viewing engine of 4th place Novi Air Conditioner Spl.

Center: Checking over Helse Spl. Car was driven by Jimmy Daywalt.

Immediate left: View of Sumar Special driven by Pat O'Connor.



Above is shown well equipped shop set up to handle the repair and servicing of various makes and models of lawn mowers and outboards.

SERVICING POWER MOWER

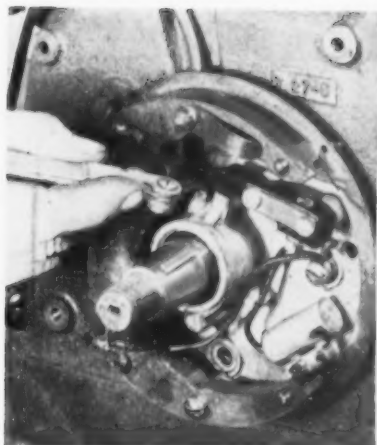
Servicing power mower and outboards is easy and profitable. Here are

THE most common causes of engine failures are fuel and ignition systems. Before attempting any repairs, make sure that the mower's tank is filled with fresh clean fuel and the mixture valve is adjusted properly and that it has a good spark, and that all the adjustments are properly made. Make a systematic check of the engine performance.

The following procedures provide an outline to follow and find the trouble. When the trouble is localized to the magneto for example, remove the wire and hold it away from the spark plug $\frac{1}{4}$ inch and turn the engine. The gap should be a clear blue spark and at least jump $\frac{1}{4}$ inch.

Be sure the shutoff valve is open, that the hole in tank cover is not plugged and mixture setting is correct. The engine may be flooded if it is warm or the mixture may be too lean as the engine is cold. If engine is flooded, shut off the fuel and pull the starter until engine starts. Allow the engine to run until it stops, reset fuel controls in the running position and restart the engine.

If engine is cold, make sure it is properly choked before starting. Check the spark plug. Remove the spark plug and examine it carefully. Examine plug for hair like deposit across electrodes or heavy carbon deposits. Should the point and the inner porcelain appear wet from either oil or water—or the



Feeler gage checks breaker point gap before assembling flywheel.

ENGINES

helpful tips on repairing them.

By **WILLIAM M. MONTGOMERY**, Associate Editor

points burned—install a new spark plug. Check the spark plug gap, adjust it to recommended specifications.

Check breaker point adjustment. Remove fly wheel and check for grass and chaff lodged between breaker points. Rotate the crankshaft, the points should close tightly and open fully with one revolution of the crankshaft.

Checking Fuel Flow

Crank engine four separate times with choke pulled out and high tension lead wire removed from the plug. Then remove spark plug. Spark plug porcelain and electrodes should be wet with raw fuel. If plug is dry, fuel is not coming through carburetor. If plug is wet the engine is flooded.

Check fuel line. Remove the fuel line from the carburetor with the valve under the tank open. Fuel should flow out of the line. If no fuel flows remove the cap from the tank. If fuel flows after removing the cap the vent hole in the top of the cap is plugged with dirt and should be cleaned. If it does not flow then after removing the cap remove the line from the tank fitting. If fuel flows from the fitting the line is plugged up and should be cleaned.

(Continued on page 88)

Coil and condenser tester is used to check a condenser and magneto, removed from an engine.

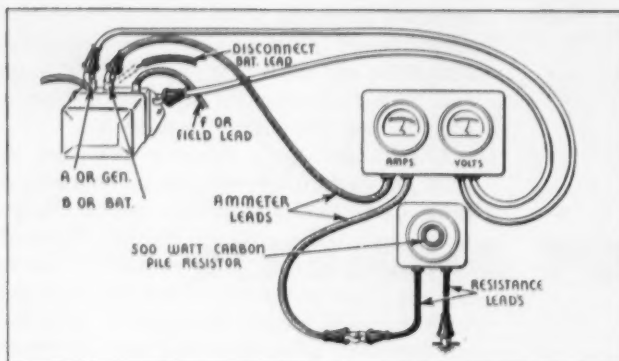


Cylinder head should be removed occasionally for cleaning carbon and checking the valves.

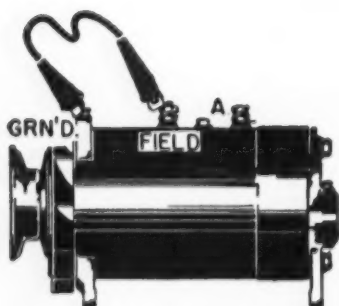


QUICK CHECKS TO PINPOINT GENERATOR TROUBLES

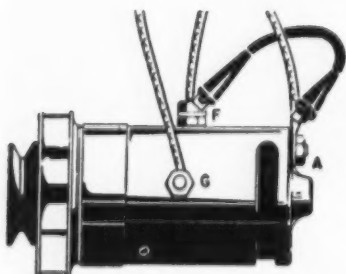
After reading this service article, try the Shop Quiz Clinic found on page 50



The schematic drawing to the left shows the correct procedure for attaching tester to regulator to check generator output.



Grounding field lead used on all but Ford Motor Company cars.



The hook-up for Ford Motor Co. cars connects "F" to "A" leads.

By EDWARD K. SHEA

BEFORE going to work on the generator or regulator, make certain that the fan belt is properly adjusted and that the battery is fully charged. Also check all electrical connections.

Using a good light and a mirror, inspect the commutator through the openings on the commutator frame (most late model cars—from '55 on). On earlier model cars, remove the

cover band and then make an inspection.

Usually low or unsteady output may result if the commutator is coated with grease or dirt, or is rough and out-of-round. Inspect end of commutator for thrown solder. This indicates that generator has been overheated due probably to excessive output.

The condition of excessive output is the result of a grounded generator field, either internally or at the regulator, or because of a grounded lead wire from the generator to the regulator.

If this be the case, disconnect the wire at the field terminal (F terminal) of the generator and run engine at moderate speed. If output drops off, the regulator will be found at fault. If output remains high, the field is grounded in the generator or the field wire connecting the regulator to the generator is grounded.

For Ford Motor Co. cars, the procedure varies slightly. Disconnect the armature and the field wires at the generator. Connect the jumper wire from the armature terminal to the generator field terminal and the negative lead of a Zero-to-50 ammeter to the armature terminal.

Start the engine and immediately connect the ammeter positive lead to the battery. With engine at fast idle, read current output on ammeter. Output should reach 35 amps.

Checking Brush Spring Tension

Brush spring tension is important also and should be checked. Bear in mind that weak spring tension will cause arcing between the brushes and commutator. Excessive tension will result in rapid wear of brushes and commutator and also create a squealing condition.

When brushes only are found in a bad condition, remove brushes, clean commutator with 00 or 000 sandpaper. Blow clean and install new brushes.

The commutator should be free from oil and have a clean polished appearance.

Even if visual inspection of the generator shows obvious defects such as a break in the wiring, worn or stuck brushes, a complete routine check should be made. While the generator is off the car, it's best to check it thoroughly.

Most generators can be repaired and returned to normal duty if the following procedures are followed:

After the generator is disassembled, check the commutator for loose or disconnected wires and carefully resolder any loose connections.

Next, insert commutator in a lathe and check for trueness. Then take a very light cut off the commutator. After this, the in-

(Continued on page 110)



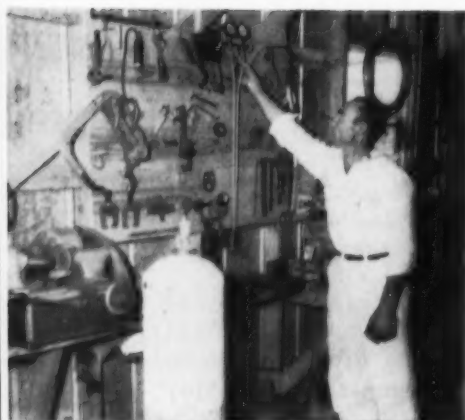
A Phillips screw driver is being used to adjust the voltage regulator.



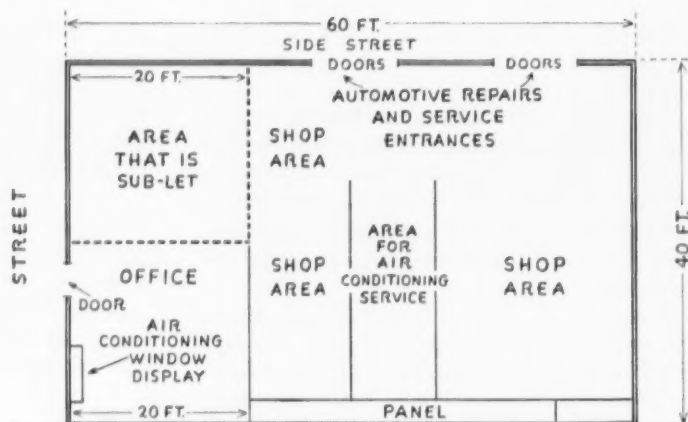
Use of a bending tool to adjust relay closing voltage is shown at right.

AIR CONDITIONING IS

Profitable shop in Southwest recommends brief schooling in air conditioning servicing for



Panel of tools used for air conditioning installation.



Floor plan of Rhodes' service shop showing location of area for air conditioning installation.

OPPORTUNITIES for shop or service department profits abound where installation and service of car air conditioning units are concerned. An example of one automotive service specialist offering a well rounded program of air conditioning service may be found in the successful techniques used by Mr. S. D. Rhodes, owner of Rhodes Automotive Service, Victoria, Texas.

Four Years in this Field

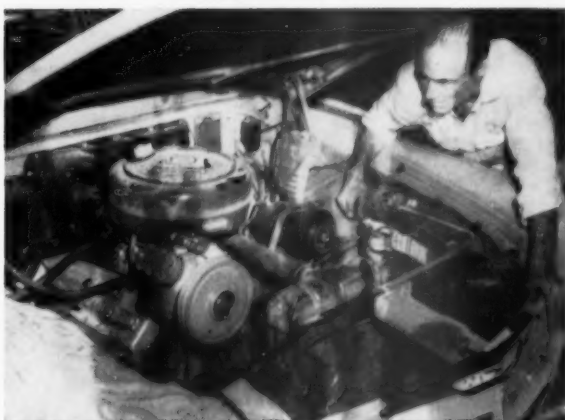
Mr. Rhodes has been installing and servicing

air conditioning units in automobiles for four years. Last year he sold and installed about 150 new units, in addition to his regular service work.

"The first thing anyone should do if he plans to get into this business," Mr. Rhodes stresses, "is to go or send at least one mechanic to school to learn the technique of installing and servicing the units. Manufacturers conduct several such schools annually. The more of them a mechanic can attend, the better qualified he is to handle installations

"HOT" ITEM

mechanics and an aggressive sales program



Air conditioning installation is checked. Mounted compressor is shown in foreground.

and service. Nobody should attempt to install or service a unit until he has gone to at least one school." Mr. Rhodes has attended five, and he plans to attend at least one every year—more if possible.

"There are changes and improvements in each new model," he says, "and unless a mechanic goes to school and learns about these changes he likely is going to run into trouble with some of the new models."

Mr. Rhodes does most of the air conditioning work himself, although he has one me-

chanic who has attended school and can assist in routine air conditioning work.

The next most important element in making a profit out of air conditioning, he stresses, is the selection of lines to sell. He handles two, and he finds that two are enough. He has the distributorship of one of these and covers a radius of about 90 miles around Victoria.

"There are a lot of new lines coming onto the market," he warns, "and the garage owner should be careful in tying up with a small, unknown manufacturer. This does not mean that some of the new lines are not good and that a man cannot safely handle them. The main thing is, make certain that the manufacturer is well financed and will continue in business."

Mr. Rhodes handles installations for a number of dealers in the area as well as selling units himself. He installs units for a number of dealers who handle units through him. He estimates that about half of his installation volume comes through these dealers.

He charges a flat \$50 for installing a new unit, but he lumps the cost of the unit and the installation cost into a single figure when talking air conditioning with a prospect. He finds that the prospect is more receptive to a flat charge. He encourages his dealers to price their units the same way.

He charges the dealer \$40 for installation, thus giving the dealer a profit of \$10 on the installation job as well as his normal profit from the sale of the unit.

The dealer is responsible for payment of both the unit and the installation. And Mr. Rhodes does no credit business whatsoever. He does have several dealers, however, who have made arrangements with the air conditioning unit manufacturers whereby the dealers are able to buy on open account. In cases like this, the manufacturer pays the

(Continued on page 80)

Air conditioning systems are shown in a display window at the right.





What About Parts & Service for Foreign Cars?

Close to half-a-million foreign cars are expected to be registered in the U. S. this year. Here is a special pertinent study of this market

By THOMAS Mac NEW, Eastern Editor

FOREIGN car sales in the U. S. are on a sharp increase, so naturally the market for service is expanding quite rapidly with the stepped up shipments of the European makes. Optimistic foreign car producers plan on selling some 200,000 cars in the U. S. this year. This, combined with the more than 200,000 already registered, means almost a half-million cars needing specialized service and parts.

Volkswagen, Ford of England, Morris, and Renault with its new Dauphine are going all out to corner the small car field. Other foreign makes too are placing more emphasis on the lucrative American car buying public. Because of the trend, many large American dealerships are taking on foreign car fran-

chises. Studebaker-Packard recently announced its tie-up with Mercedes-Benz. American Motors has had a relatively long-standing arrangement with its dealers on the Metropolitan. There are several cases, for example, where Buick or Olds dealers are working with Morris and MG in the Philadelphia area.

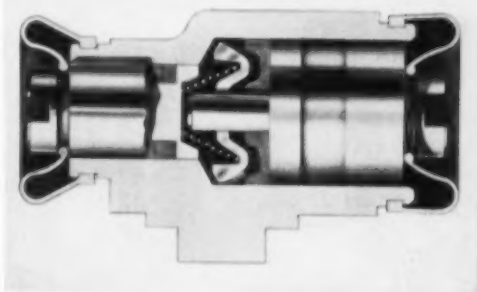
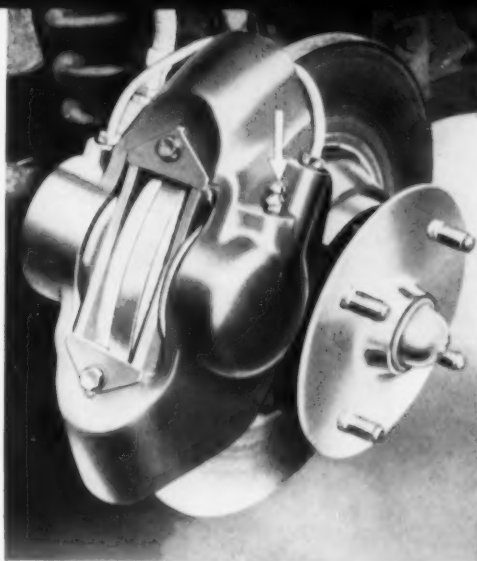
Needs More Coverage

The foreign producers need more dealer coverage in the U. S. to sell cars. Most of them are strong in the coastal areas near ports of entry; and now they are turning their attention to the mid-west, the south, the middle northern states, and the north-west.

Approximately, three-quarters of the foreign jobs purchased here are of the short wheelbase type and only a couple of them, Ford and parts of the Metropolitan, are made to American standards of measurement. Most of the imports, because they are made to the metric system, require special tools for mechanical repair work. Recognizing the need for these tools and other special equipment, some farsighted U. S. firms have already entered the market. Previously, all tooling had to be purchased abroad or be adapted by the man in the shop. Even today, however, some equipment will still be imported since the American small tool makers can only economically produce for the higher sales volume cars like the Volkswagen.

There are still many jobs that U. S. repair shops can perform without special tools,

(Continued on Page 84)

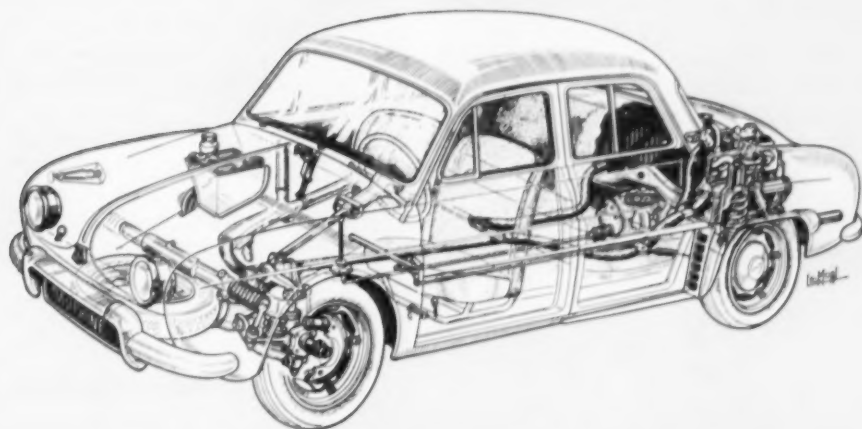
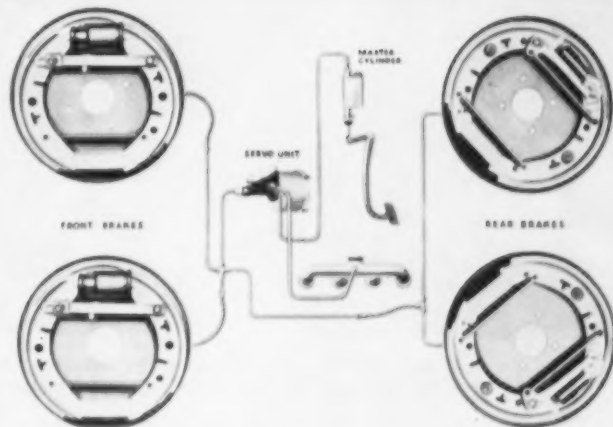


Top right: The Girling Disk Brakes on the front wheels of the Triumph TR3 are shown.

Upperright: Wheel brake cylinder of the Lockheed power brake system is presented.

Right: A schematic drawing of complete braking system of Lockheed Power Brakes.

Bottom: Cutaway of new Renault Dauphine. Plans are to sell 25,000 in U. S. in '57.



Replacing

Door Glass On

GM Cars



1. To take out the clips holding the inside door handles use the special tool shown in picture.

DOOR glass replacement procedure on 1957 General Motors closed bodies is basically the same for all manually operated door windows.

Short cuts have been devised by some mechanics to remove and replace door glass but it is the general opinion that factory procedure will result in a thorough job with less chance of damage to any vital parts.

First, lower the window and remove the

garnish mouldings. Then, using the special tool, take out the clips holding the inside door handles [see Fig. 1]. These clips are located between the handle and the upholstery protecting washer.

Now remove the arm rest, trim panel, waterproof paper and access hole covers.

Ventilator Assembly Comes Out

On closed bodies it is necessary to take out the ventilator assembly in order to replace the door main glass. Remove in the following manner: Take out the screw holding the ventilator shaft to the regulator and the screws holding the regulator to the door [see Fig. 2]. Now remove the regulator from the door through the access hole. The next step is to disconnect the ventilator division channel adjusting stud and nut and remove the ventilator attaching screws [see Figs. 2 & 3]. Now lower the ventilator enough to tilt it inward at the top, then lift it upward and out of the door.

With the window in the lowered position, remove the lower sash channel screws through the access holes. [See Fig. 4]. Carefully raise the glass to an almost closed position and tilt it inward at the top, using care to work out one of the lower corners at a time.

With the glass out of the door, squirt gasoline on the glass filler along the lower channel to soften the seal, then remove the glass from the channel. Thoroughly clean the inside of the channel to remove all rust, etc.

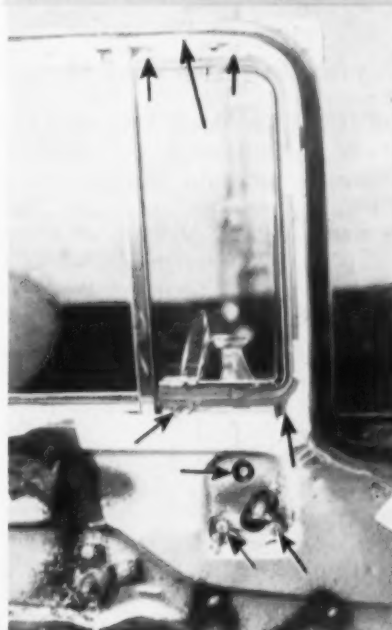
By following the factory procedure in removing and replacing door glass, the mechanic can insure a thorough and accurate job for his customer with little chance of damage to the parts

By LEO A. MEALEY, Jr.

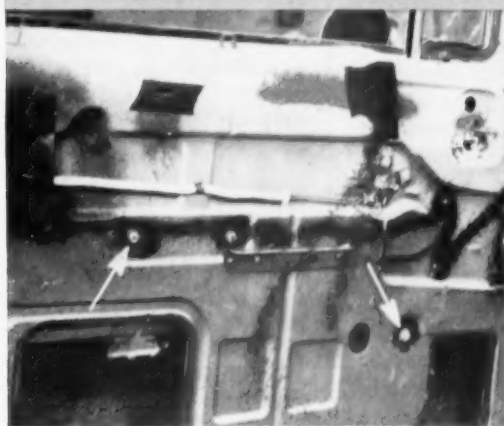
Use new glass channel filler and cut it two inches longer than the bottom edge of the glass. Place this piece of filler, soap stoned side away from the glass, along the edge of the glass which will fit into the channel. Now pinch the extending pieces of filler together, brush the inside of the metal channel with lightweight engine oil and push the glass, with the filler, into the channel until it is firmly seated. After the glass is in place the oil softens the filler, causing it to swell, thereby making a watertight seal. Trim off the excess filler and the window is ready to

Continued on page 90

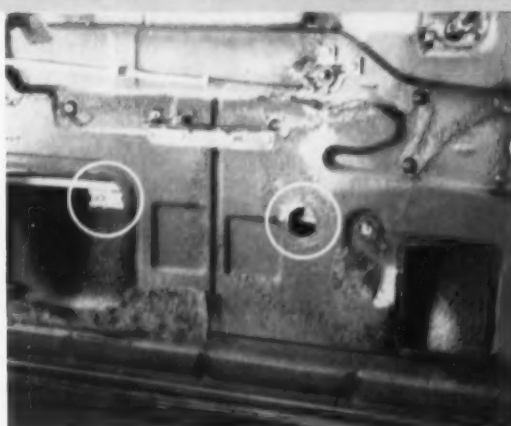
- 2.** Take out screw holding ventilator shaft to regulator and screws holding it to door.



- 3.** Remove regulator. Disconnect ventilator division channel adjusting stud and nut.



- 4.** With window in lowered position remove sash channel screw through access holes.



MOTOR AGE SHOP CLINIC



An absorbing and easy-to-take type quiz based on the service article which begins on page 42

QUIZ

FOR JUNE, the Motor Age Shop Clinic Quiz is on "Quick Checks to Pinpoint Generator Troubles." This article begins on page 42 of this issue. After reading the contents of this feature, you should be ready to take the 10-question quiz. Correct quiz answers appear elsewhere on this page in the inverted box.

When answering any of the "true or false" questions, keep in mind that a partly true, partly false statement should be treated as a false statement.

1. Name three preliminary steps to take before actually checking a generator or regulator suspected of poor operation.

2. When checking the commutator, if commutator is coated with grease or dirt—or rough and out-of-round—what type of output may be suspected?

3. If the end of the commutator shows signs of thrown solder, what type of output condition may be suspected?

4. Grounded generator field can occur either internally, at the regulator, or because of a

grounded lead wire from the generator to the regulator. In either of these three cases, the condition of (excessive) or (insufficient) output is the result. (Choose which of the two words makes this statement correct).

5. Weak brush spring tension can be the cause of what troubles (list two)?

6. Excessive brush spring tension can be the cause of what troubles (list two)?

True or False Section

7. If the condition of excessive output exists due to a grounded generator field, here is the test to decide whether the field is grounded in either the generator or regulator: Disconnect the wire at the field terminal of the generator and run engine at moderate speed. If output drops off, the generator will be found at fault. If output remains high, the field is grounded at the regulator.

8. Check the field coils by putting one lead of the test lamp on the field terminal outside of the housing and the other lead to the armature terminal. If test lamp does not light, the field coils are open

and should be replaced.

9. When checking brush holders for ground, if a brush holder is grounded, the test lamp should not light.

10. When checking the armature for short circuit on a growler, once the test lamp is hooked up properly and the lamp lights up, this indicates the armature is grounded.

ANSWERS TO QUIZ (Hold page upside down)

1. Check fan belt for tightness, check for fully charged battery, check electrical connections in general.
2. Low output, unsteady output.
3. Generator overheated due to excessive output.
4. Excessive.
5. Arcing and erratic output.
6. Rapid brush wear and squealing.
7. False. If output drops, regulator at fault; if output remains high, generator at fault.
8. True.
9. False. Lamp should light.
10. True.



"Here comes Mr. Do-It-Yourself!"

POP READS THE PAPERS

No paper can distract Pop O'Neill from solving transmission trouble

By WILLIAM H. WOLFE, Managing Editor

SUN speckles filtering through the Norway maples flowed across the hood of the wrecker as Larry headed towards the shop. As he pumped the brakes for the turn into Smythe Boulevard, Larry saw a group of youngsters rapidly gathering on the sidewalk. The wails of one little girl, about seven or eight years old, reached his ears.

"Probably one of the kids pulled her hair," thought Larry glancing over for a second look. But the expression on the little girl's face said it was more than a tweaked pig tail, beyond the routine of a scuffed knee or a tri-cycle hassle.

Sighing, Larry pulled over to the curb and poked his head out of the cab's window. "What's the matter here?" he called. For a moment, no answer was forthcoming. Then one little boy, a dirt smear wiggling along one of his cheeks, piped up:

"It's Cynthia. She's gotten stuck."

"Cynthia . . . Stuck?" questioned Larry. "Where?"

Dramatically several pairs of arms pointed upwards.

"Oh, so that's Cynthia!" Larry caught a glimpse of a small black and white kitten marooned among the maple leaves. "I think Pop O'Neill's wrecker can handle this emergency."

Larry edged the wrecker under the limb that held the kitten. Larry shoved a fender cloth onto the cab's roof and climbed up. After a brief skirmish punctuated by a few "meows" of protest, the kitten was restored

(Continued on page 92)

Larry saw a group of youngsters rapidly gathering on the sidewalk.

C. WHITMAN



Service Man's

Idea Book

Report on Car Breakdowns

One breakdown a year is par for each of the nation's 54 million passenger cars, the American Automobile Association's annual survey of car troubles revealed recently. The association estimates there were 53,486,000 breakdowns last year, an increase of 3,347,000 over 1955.

The lowly "flat" again headed the list as the most frequent cause of a call for help. Nearly one-fourth of all service calls—12,906,000—were because of tire trouble. Battery and electrical faults ran a close second, with an estimated 12,018,000 calls.

Serious troubles took a sharp swing upward during the year. In all, nearly 6.5 million cars had to be towed or hauled by wrecker to garages or other service facilities.

Teen-Ager Influence

Never underestimate the influence of a teenager. Every year there are more and more of them. . . . Most of them expect they will have a lot to say about the next car the family purchases. . . .

In addition, the 16- to 19-year-olds, particularly the boys, represent a huge market for used-car sales.

Because of all those factors, according to Alan G. Rude, president of Universal C.I.T. Credit Corp., cultivation of the teen-ager must have an important place in any automobile dealer's sales program.

Out-of-State Telephone Books

"It doesn't cost us much, but it sure gets newcomers to our area acquainted with us and nets us a lot of local publicity." So writes H. J. Miller, Florida garage owner, who

earns a "Service Man's Idea Book" award this month. Mr. Miller explains his idea: "we keep some shelves stacked with telephone books from cities in distant states, and offer free use to everybody."

"Since our city is a mecca for Florida tourists, it often happens that when these visitors seek to send gifts or greetings to folks at home, they have either mislaid or neglected to bring along their addresses. . . .

"We keep our book file up to date by outright purchase of the most wanted books, and grateful users who make a second trip to our area often bring back the directory of their city, proud to have it represented in our collection."



Miller's Auto Repairs establishment keeps stock of telephone books for tourist to look up addresses.



Business facts of life

"Questions in the Sales World"

Jess Eilar's concluding article of a series devoted to the American business scene

SALES people know that answering questions is routine. Life begins with a question mark, develops into a dash, ends with a period. When a boy is seven he knows all the questions. When he is seventeen he knows all the answers. When he becomes as old as his dad is now he isn't sure he knows either.

What Size Please?

This is the most important question in the business world today. Without the correct answer to this question, the wheels of industry would grind to a halt, hot smokestacks would turn cold, business would fold up, cars would sit idle in parking lots and grass would grow in city streets.

Every part in mass production is ground to size within fine tolerances. Every item sold across the nation's counters is conditioned to size. Inventories are based on the size of the market potential. World War III is stayed only by the size of the Free World's military muscle.

Car dealers and independent garage men have a vast stake in the size and activity of the 1957 new car and maintenance markets.

Car builders and dealers know that keeping the cost of new cars within sound limits

is an important question in the automotive world in the months ahead. But it also stems back to the size of car buyer's pocket book and the strength of the new car demand in 1957. Most of the things that consumers buy could be deferred. Certainly, buyer resistance to price markups in the new 1957 models can't be ruled out of sales strategy.

Can the industry pass along to the public the wage increases in steel and car manufacturing plants? How to hold down the cost of building the new models?

The New Salesman

The new salesman in the new world recognizes three questions of paramount importance to him:

1. What is the size of the market which I serve?
2. What is the size of the man on the street—the customer?
3. What is my own size as a salesman?

More than sixty million motor vehicles operate on the nation's highways today. Another four million farm tractors turn up the fertile soil of America's productive acres. Stationary engines, motorcycles, airplanes, and outboard motors must be serviced and kept in motion. Car dealer and independent



"Without the correct answer to this question . . . cars would sit idle in parking lots."

service shops have their job cut out. The more than 45,000 car dealer shops and the 77,800 independent repair shops may expect an increase of around 7 per cent in business volume in 1957 at the national level. But that doesn't assure any particular shop that increase, for new establishments and keen competition will strive for this new business.

That means that there can be no sales complacency at the garage level.

Personal Drive Needed

Personal drive has always paid off.

You may remember how a boy named Dick some years ago left his telegraph keys to become a salesman. He started out with a box full of inexpensive watches, a ready-made distribution system (railroad men), lots of personal drive, and an IDEA.

The idea: To sell cheap with money-back guarantee. He made good. Today the company he started grosses over \$2.5 billion a year and employs more than 150,000 people. Dick Sears demonstrated that personal drive takes precedence over bargains and ballyhoo.

The customers' world is changing and he is changing with it. This was the key thought at a recent gathering of advertising men. If anyone knows, they do along with purchasing agents. Next to mingling with salesmen, I enjoy sharing ideas with purchasing agents and the ad men!

For one thing, the post-war seller's market has changed into a buyer's market. The customer is king.

The question no longer is whether dollars going to market will find goods and services

(Continued on page 104)

MANAGEMENT CLINIC



Keeping customer good will

Once a service station has built up a list of solid customers, complacency may creep in. Read why such an attitude is fatal

I'M sorry," said the lady firmly, "but I'm taking my business elsewhere." Then she stepped on the gas and drove off in a huff, leaving the service station proprietor standing by his pumps, with a perplexed expression on his face. Then he shrugged his shoulders and reflected, "Let her go. The trade that I get from her doesn't come to beans."

He may have been justified in coming to this conclusion. Some customers really are down-and-out headaches. But on the other hand, no service station operator can maintain the best shop in the world if customers won't stop to patronize it. When the average customer is displeased, there is generally a good reason. Was there a dispute over a bill? Did an employee treat the customer discourteously? These are only a few of many possible good causes. But even if the customer happens to be dead wrong, you lose—if this also results in the loss of good trade.

Word of Mouth Advertising

This is true even though the amount of business involved is slight. Because good will has a value of high proportion. For word of mouth advertising is still potent. The type of lady described is usually the sort who influences all her friends and relatives to trade

with you—or elsewhere. So your stake in this type of customer is of importance.

Obviously, the easiest way to keep her patronage is not to displease her in the first place. The old adage, "an ounce of prevention is worth a pound of cure," is true in the automotive business as it is in other businesses. Nevertheless, according to a survey that was made on the subject recently, service stations lose their customers for the following reasons and in these approximate proportions:

1 per cent of a year's customers die.

3 per cent move to other neighborhoods.

4 per cent are "floaters."

5 per cent switch service stations because of recommendations by friends and relatives.

9 per cent claim they can buy for less elsewhere.

10 per cent are chronic complainers.

But a full 68 per cent of customer turnover, the survey continues, is mainly to the indifference on the part of the service station operator or his employees.

How about if your service station is an old and established neighborhood tradition? According to this survey, you are especially prone to such negligences. Your reasons, though, are understandable: Either you feel

(Continued on page 106)

1957 Tune-up—Alignment Specifications

MAKE AND MODEL		ENGINE		TUNE-UP DATA										FRONT END ALIGNMENT			
		No. of Cylinders Bore and Stroke (In.)	Maximum Brake H.P.	Spark Plug Make and Size (mm)	VALVES				IGNITION				King Pin Inclination Deg.	Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	
					Seat Angle		Operating Tappet Clearance		Breaker Point Gap (In.)	Cam Angle (Deg.)	Spark Plug Gap (In.)	Spark Occurs T. C.					
					Inlet (Deg.)	Exhaust (Deg.)	Inlet (In.)	Exhaust (In.)									
AMERICAN MOTORS CORP.																	
Hudson	8-35780	8-4x3 1/2	255	CA-14	30	45	Hyd	Hyd	.018	30	.035	58	8 1/2	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1/2 to 1/2	
Metropolitan	4-561, 562	4-2 1/2 x 3 1/2	92	Ch-14	45	45	.015HC	.015HC	.015	30	.024	118	8 1/2	2P to 3P	1 1/2 P to 1 1/2 P	0 to 1/2	
Nash	8-6780	8-4x3 1/2	255	CA-14	30	45	Hyd	Hyd	.016	30	.035	58	8 1/2	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1/2 to 1/2	
Rambler	8-6710	6-3 1/2 x 4 1/2	125	CA-14	45	45	.012H	.016H	.018	32	.035	TC	8 11'	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1/2 to 1/2	
	8-5720	6-3 1/2 x 3 1/2	190	CA-14	30	45	.012H	.014H	.016	30	.035	58	8 11'	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1/2 to 1/2	
	8-5730	8-4x3 1/2	255	CA-14	30	45	.012H	.014H	.016	30	.035	58	8 11'	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1/2 to 1/2	
CHRYSLER CORP.																	
Chrysler	8-C-75-1	8-3 1/2 x 3 1/2	285	AL-14	45	45	Hyd	Hyd	.017	31	.035	68	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
	8-C-75-2	8-3 1/2 x 3 1/2	295	AL-14	45	45	Hyd	Hyd	.017	31	.035	68	8 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	
	8-C-78	8-4x3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	68	8 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	
	8-C-78-300	8-4x3 1/2	375	AL-14	45	45	.015H	.024H	.017	30	.035	48	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
De Soto	8-S-27	8-3 1/2 x 3 1/2	245	AL-14	45	45	Hyd	Hyd	.017	31	.035	68	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
	8-S-25	8-3 1/2 x 3 1/2	270	AL-14	45	45	Hyd	Hyd	.017	31	.035	68	8 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	
	8-S-26	8-3 1/2 x 3 1/2	285	AL-14	45	45	Hyd	Hyd	.017	31	.035	68	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
	8-S-26 Adventurer	8-3 1/2 x 3 1/2	345	AL-14	45	45	Hyd	Hyd	.017	30	.035	68	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
Dodge	8-D-71, D-72	8-3 1/2 x 4 1/2	138	AL-14	45	45	.010H	.010H	.020	39	.035	TC	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
	8-D-66, D-67-1	8-3 1/2 x 3 1/2	245	AL-14	45	45	Hyd	Hyd	.017	31	.035	68	8 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	
	8-D-67-2	8-3 1/2 x 3 1/2	260	AL-14	45	45	Hyd	Hyd	.017	31	.035	68	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
	8-D-508-1	8-3 1/2 x 3 1/2	340	AL-14	45	45	.015H	.024H	.017	30	.035	68	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
Imperial	8-IM1	8-4x3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	31	.035	68	8 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	
Plymouth	8-P-30	8-3 1/2 x 4 1/2	132	AL-14	45	45	.010H	.010H	.020	39	.035	TC	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
	8-P-31-1	8-3 1/2 x 3 1/2	197	AL-14	45	45	.008H	.018H	.017	31	.035	48	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
	8-P-31-2, P-31-3	8-3 1/2 x 3 1/2	215	AL-14	45	45	.008H	.018H	.017	31	.035	68	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
	8-P-31 Fury	8-3 1/2 x 3 1/2	280	AL-14	45	45	.008H	.018H	.017	30	.035	68	8 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
FORD MOTOR CO.																	
Continental	8-60A	8-4x3 1/2	300	Ch-18	45 1/2	45 1/2	Hyd	Hyd	.015	27	.034	50	7 1/2	1 1/2 P to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	
Ford	8-57A, B; 58A, B; 73A, B	8-3 1/2 x 3 1/2	144	Ch-18	45 1/2	45 1/2	.019H	.019H	.025	37	.034	48	7 1/2	1 1/2 P to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	
	8-73A, B	8-2 1/2 x 3 1/2	190	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	38	7 1/2	1 1/2 P to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	
	8-57A, B; 58A, B	8-3 1/2 x 3 1/2	206	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	38	7 1/2	1 1/2 P to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2	
	8-40A, B	8-2 1/2 x 3 1/2	212	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	38	7 1/2	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1/2 to 1/2	
Lincoln	8-57A, B; 58A, B; 60A, B; 76D	8-4x3 1/2	300	Ch-18	45 1/2	45 1/2	Hyd	Hyd	.015	27	.034	50	7 1/2 14"	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
Mercury	8-57A, B; 58A, B	8-3 1/2 x 3 1/2	255	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	38	7	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
	8-75A	8-4x3 1/2	290	Ch-18	45 1/2	45 1/2	Hyd	Hyd	.015	27	.034	38	7	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2	
GENERAL MOTORS CORP.																	
Buick	8-40	8-4 1/2 x 3 1/2	280	AC-14	45	45	Hyd	Hyd	.015	21	.033	68	7 3/2 1/2	1 1/2 N	1 1/2 P	1/2 to 1/2	
	8-50, 60, 70	8-4 1/2 x 3 1/2	300	AC-14	45	45	Hyd	Hyd	.015	21	.033	68	7 3/2 1/2	1 1/2 N	1 1/2 P	1/2 to 1/2	
Cadillac	8-60, 62, 75	8-4x3 1/2	300	AC-14	45	44	Hyd	Hyd	.019	31	.035	58	4	1 1/2 N to 1 1/2 N	1 1/2 N to 1 1/2 P	1/2 to 1/2	
Chevrolet	8-1500, 2100, 2400	8-3 1/2 x 3 1/2	140	AC-14	31	46	Hyd	Hyd	.019	32	.036	TC	4	1 1/2 P to 1 1/2 P	0 to 1P	1/2 to 1/2	
	8-1500, 2100, 2400	8-3 1/2 x 3	162	AC-14	45	45	Hyd	Hyd	.019	30	.036	48	4	1 1/2 P to 1 1/2 P	0 to 1P	1/2 to 1/2	
	8-1500, 2100, 2400	8-3 1/2 x 3	185	AC-14	45	45	Hyd	Hyd	.019	30	.036	48	4	1 1/2 P to 1 1/2 P	0 to 1P	1/2 to 1/2	
	8-2344	8-3 1/2 x 3	220	AC-14	45	45	Hyd	Hyd	.018	29	.036	48	4	0 to 1P	0 to 1P	0 to 1/2	
Oldsmobile	8-88, Super 88, 98	8-4x3 1/2	277	AC-14	45	45	Hyd	Hyd	.018	30	.030	58	7	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1/2 to 1/2	
Pontiac	8-67-27 Chieftain	8-3 1/2 x 3 1/2	227	AC-14	30	45	Hyd	Hyd	.018	30	.036	68	1 1/2	1 1/2 N to 1 1/2 N	0 to 1P	0 to 1/2	
	8-57-27 Super Chief, Star Chief; 57-28	8-3 1/2 x 3 1/2	244	AC-14	30	45	Hyd	Hyd	.018	30	.036	68	1 1/2	1 1/2 N to 1 1/2 N	0 to 1P	0 to 1/2	
STUDEBAKER-PACKARD CORP.																	
Packard	8-57L	8-3 1/2 x 3 1/2	275	Ch-14	45	45	.024H	.024H	.016	31	.036	48	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2	
Studebaker	8-57G	6-3 1/2 x 4 1/2	181	Ch-14	45	45	.018C	.018C	.020	39	.031	28	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2	
	8-57H	8-3 1/2 x 3 1/2	180	Ch-14	45	45	.024H	.024H	.016	31	.036	48	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2	
	8-57H	8-3 1/2 x 3 1/2	210	Ch-14	45	45	.024H	.024H	.016	31	.036	48	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2	
	8-57H Golden Hawk	8-3 1/2 x 3 1/2	275	Ch-14	45	45	.024H	.024H	.016	31	.036	48	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2	

ABBREVIATIONS

1—Left only; right, 1/2 N to 1/2 P.
2—Eldorado models, 325.
AC—A. C. Spark Plug Div.

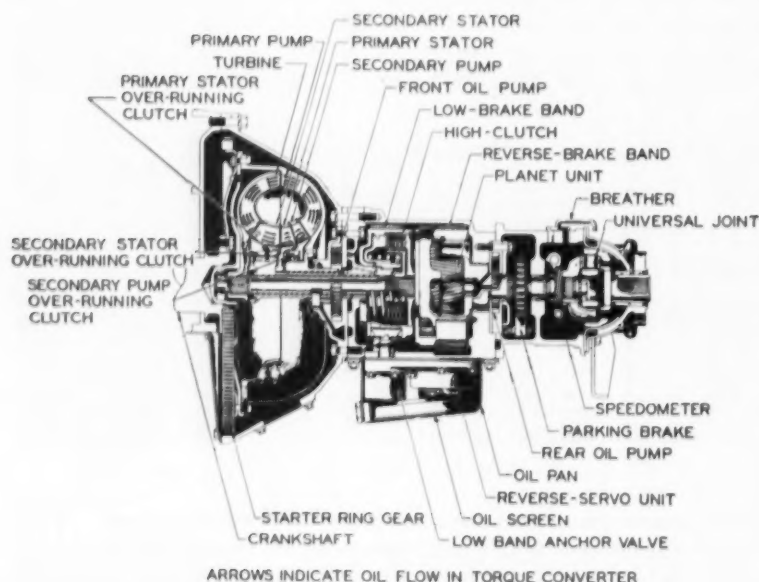
AL—Electric Auto-Lite Co.
B—Before top center.
C—Cold.
CA—Champion or Auto-Lite.

Ch—Champion Spark Plug Co.
H—Hot.
HC—Hot or cold.
Hyd—Hydraulic valve lifters.

N—Negative.
P—Positive.
TC—Top center.

READERS' CLEARING HOUSE

TROUBLE SHOOTING



1951 Buick Jumps When Put in Reverse

I have a 1951 Buick, Dynaflow that jerks and jumps when it is put in reverse and backed up a little too fast. It only does this at a high reverse speed. I installed new mount pad and thrust pad in the rear motor mount, but this didn't seem to help.

*E. P. Radmacher
Rad's Texaco
Pendleton, Oregon*

USUALLY, when a condition like yours arises, it is due to improper band adjustment, loose or worn thrust pad at the transmission, or sticking or warped clutches. I would suggest adjusting the reverse bands and then the other items. If this does not help, remove the transmission to check the clutch plates. A little chatter is considered normal on these jobs, but not as much as you have indicated.

Spark Plugs Break Down In '49 Olds After 300 Miles

We have a spark plug problem on a '49 Oldsmobile. We installed new spark plugs and after three or four hundred miles the plugs started to break down. We have tried various makes of plugs in different heat ranges. We have rebuilt the distributor, including new bushings, points, condenser and installed new wires. We have tried a different coil. Carburetor and compression also checked out OK. At low and medium speeds, it runs fine. Engine's vacuum is good and registers 21½ inches.

*Isaac Shiflett
Shiflett's Garage
Adel, Georgia*

SINCE you have gone over the ignition system and wiring very carefully there might be the possibility of a lean mixture causing your trouble. I would suggest giving the carburetor a thorough going over, paying particular attention to the float level. Also, excessive carbon deposits due to oil passing the rings or intake valve guides would shorten the plug life.

FOR ADDITIONAL SERVICE INFORMATION REFER TO CHILTON'S

PROBLEMS



By Jack Montgomery
Technical Editor



Noisy Hydraulic Valve Lifters on '55 Chevrolets

I would appreciate your help in finding the solution to noisy hydraulic valve lifters on 6 cylinder '55 Chevrolets. It seems that at various times (no set pattern) one or two lifters are very noisy for from 1 to 2 minutes. Then they quiet down again. I have installed new oil pump and have cleaned the lifters. This helped for about 1,000 miles and then it started again.

*Bogue's Service Station
Savanna, Illinois*

USUALLY, when this happens it is due to dirt particles in the oil which causes the lifters not to hold their pressure at times. A lot of fellows have been getting good results by using an additive in the crank case oil. This keeps the particles in suspension. It is not unusual for these lifters to be noisy after the car has set over night, this happens from the valve being held open over night. It forces the oil out of the lifter, but this should not happen after the engine is warmed up.

'55 V-8 Ford Sedan Has Scraping Noise in Engine

We are trying to locate a noise in the motor of a 1955 Ford sedan with a standard transmission. The car was in a wreck and was out in the weather for some time. When we tried to start it we had quite a bit of trouble with 2 exhaust valves sticking. However, we idled it for a while using 2 or 3 kinds of valve freeing oils and they stopped sticking. Since then, at idling speed, there has always been a scraping noise in the motor, once every cycle, about the length of time it takes for a valve to open. The noise decreases and disappears as the motor speed is increased. We cannot tell that the noise comes from any certain valve or rocker arm and there is no noise that we can tell in the fuel pump when we use a 1/8 inch welding rod as a sounding rod.

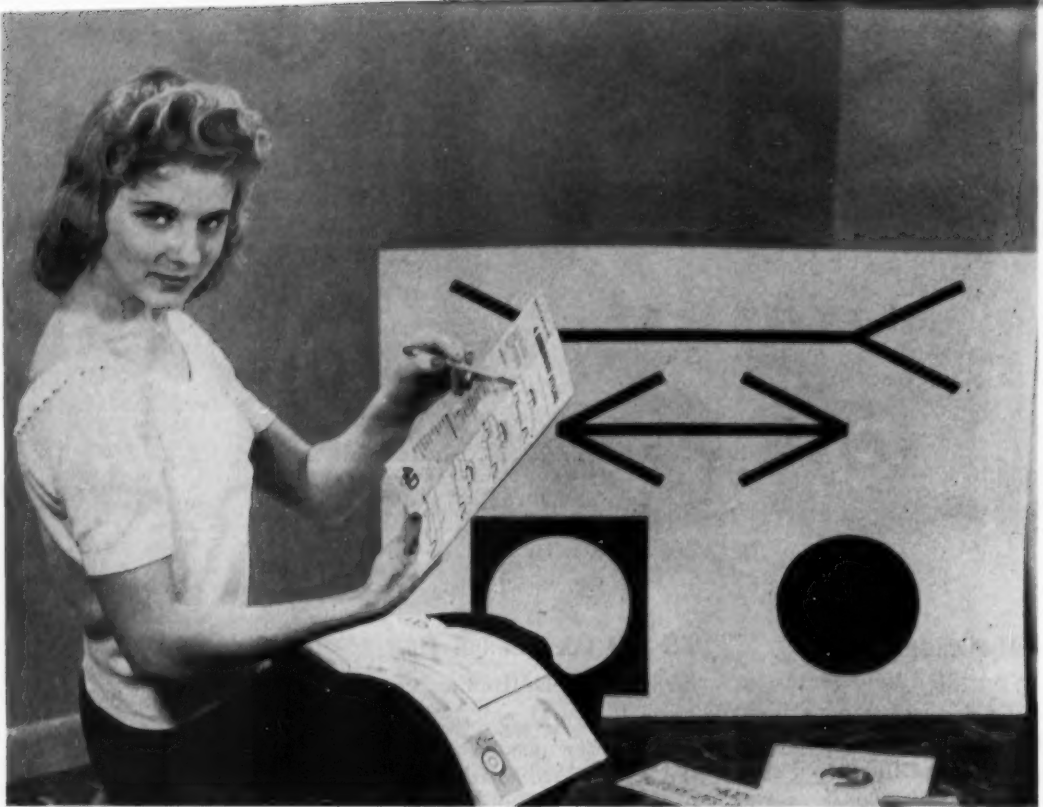
*Kermit Grimm
Corner Garage
Hurdsville, North Dakota*

IT seems to me that this noise still could be in the valve sys-

tem and I would suggest removing the valve covers and squirting a little oil on top of each spring to see if that changes the noise any. Another thing you might try is taking a pair of pliers and rotating the caps on each valve. Sometimes this will free them up and remove a valve noise. I would also suggest checking the fan and generator belts, making sure these are not guilty of the noise, also check the heat damper and exhaust system for looseness and vibrations.



MANUAL MOTOR AGE FLAT RATE AND SERVICE

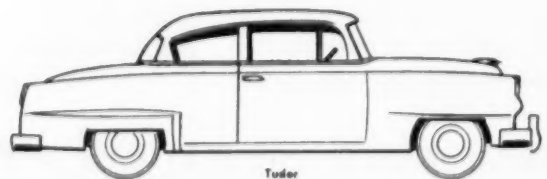
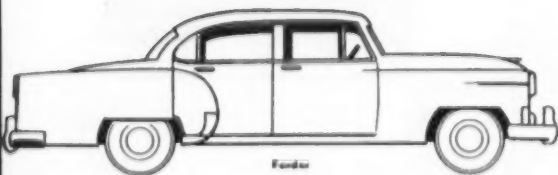


Model is holding a 4-D Styling sketchpad and manual. Chart in background pictures two optical illusions.

Futurize

WITH 4-D STYLING

DOOF program helps show potential customers that with selected colors and expertly styled lines their present cars can have an up-to-date appearance



BUSINESS-building program for body shops which suggests a new way to attract additional non-insurance refinish work has been announced for June and subsequent months by the national Dents Out of Fenders (DOOF) committee.

The overall DOOF program will: identify shopmen as craftsmen in the public eye; overcome cut-price competition; build customer relations and good will; and increase body shop business by 25 per cent, according to W. E. Marsden, DOOF chairman.

A special feature of the service program gives body shop men an opportunity to show the prospective customer not only how much the basic repairs will cost, but how his car can be "futuraized" with a carefully planned and executed repaint job. The cost to be not a great deal more than simply repairing the dents. The theme of this year's program is "Futuraize with 4-D Styling."

One of the most effective answers to cut-price competition, Marsden points out, is the regular performance of high quality work. Also, the additional services which can be offered to a customer. These additional services include the new color styling program available to shops which participate in the 1957 DOOF program. A new wall chart for year-around use which shows the customer—step by step—how his car will be refinished.

Show the Customer

A customer must be shown, however, why "job time" is important, and to fully appreciate the shop's efforts to serve him he must understand what the shop has to do to perform quality work. The wall chart goes a long way in helping the shop along these lines, Marsden noted, and towards establishing body shop men as craftsmen.

(Toward this end the DOOF committee is

cooperating with body shop associations—and is anxious to get in touch with any of these associations which may not have been contacted.)

To further encourage public recognition of metal men and painters as craftsmen and artists in their field, and to aid the shop in gaining the additional 25 per cent volume, the DOOF program helps these men show potential customers that with selected colors and expertly styled lines their cars can have many of the up-to-date features of the 1957 models.

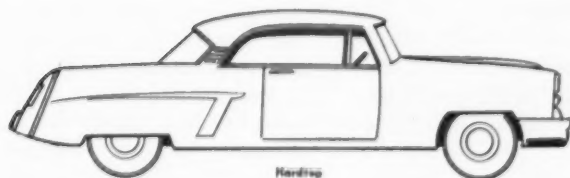
These major features are length, height, breadth and overall impact; or, as incorporated in the DOOF program, longer, lower,

(Continued on page 100)

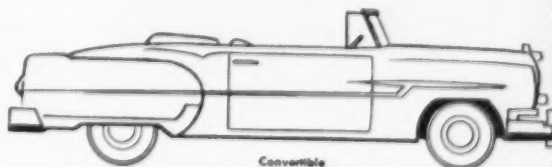


Body shop manager runs an estimate on damaged car to show customer what will be done to car.

Four models below can be "futuraized" with a carefully planned and executed repaint job.



Hardtop



Convertible

SHOW NEW PRODUCTS WINDOW

New Oscilloscope

An oscilloscope type testing unit, known as the Sun Scope Model SS, has recently been marketed and is said to be designed for automotive ignition analysis. The company states that the pattern interpretation has been simplified. According to the manufacturer, the Sun Scope produces a waveform pattern on the screen due to circuitry which determines the arrangement and trace. Cylinder performance comparison is said to be made possible by displaying all cylinder patterns across the screen, individually or in normal firing order. The unit is said to operate on standard 115 volt AC and may be used in a vehicle, operated from the bat-



tery through a 100 watt inverter. Write: Sun Electric Corporation (M.A.), Chicago 31, Illinois.

Battery Fluid Dispenser

A new five gallon electrolyte container with fluid dispenser has been introduced. The manufacturer states that activating dry charge batteries with the new fluid dispenser and the five gallon container saves time in eliminating job of handling and opening small individual con-



tainers; stops waste by eliminating a funnel thus giving the service station operator a clear view of the fluid level. Write: United Motors Service, Division of General Motors Corporation (M.A.), General Motors Building, Detroit 2, Michigan.

Parts Cabinet

A metal service parts cabinet with an inventory control plan has been recently introduced. According to the manufacturer, the cabinet is 24" wide x 12" deep with a 24" high base and 15" top section. It is said to be of dowel joint construction to

permit the addition of more integrated cabinet space as the



service operation grows. Write: Auto-Lite Business Expansion Program (M.A.), Toledo 1, Ohio.

Replacement Tire

According to the manufacturer, "Deluxe Super Champion," a replacement tire, will make its debut. It is said to be a low-priced tire designed for the higher horsepower cars and turnpike driving. The company claims to have made three changes in the manufacturing process. First, a heat resistant tread compound is said to be used to reduce oxidation and deterioration, for stronger resistance to tread separation. It is also claimed that the fourth ply is beefed up with a synthet-

ic rubber. A layer of adhesion stock is added between the



fourth ply and tread, it is said, to eliminate separation. Write: *The Firestone Tire & Rubber Co. (M.A.), 1200 Firestone Parkway, Akron 17, Ohio.*

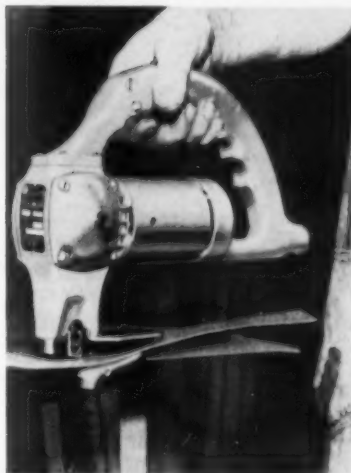
Wrench Socket

A new type of wrench socket has been introduced which, it is said, can be used to unfasten undercoating covered nuts and bolts without scraping the undercoating. According to the company, the new sockets are of the standard deep type but the outside edge of the socket mouths is grooved. Less than one turn of the socket mouth against a heavily undercoated bolt will cause the grooves to bite through the undercoating and after a little more rotation the socket mouth finds its way into driving engagement over the bolt head. Write: *Practical Products Co. (M.A.), Wilmington, Delaware.*

New Cutting Shear

A new shear has been introduced which is said by its manufacturer to be able to cut sheet metal and wire netting. It is powered by a motor that has an armature design for heavy-impact service and, according to the company, will cut through

cold rolled steel at speeds up to 30 feet per minute. The shear is designed with a one-piece shoe, contoured to indicate the correct cutting angle, and constructed to permit cutting to a small radius. Blade adjustments will accommodate the tool to different material thicknesses. It is said that a deflector-plate on the shear will prevent the metal from curling. Write: *The Black*



& Decker Manufacturing Company (M.A.), Towson, Maryland.

Road Tar Remover

According to its manufacturer, 6383 Kleanz-Easy cleaner will remove tar, road oil, grease and other residue without softening the acrylic lacquer finish. The company also states that the cleaner removes non-silicone waxes and many types of silicones. It is claimed that the cleaner is also safe and effective for standard lacquer finishes. Write: *Martin-Senour Company (M.A.), 2500 S. Senour Ave., Chicago.*

Chrome Grille Guard

New lower grille guard for '57 Plymouths is now available. The manufacturer states that they can be installed by Plymouth dealers. The grille guard is

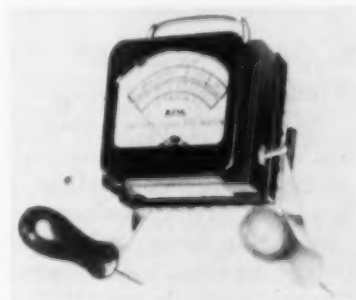
a chrome-plated steel bar that is both bolted and clamped to the lower edge of the front bumper at both sides, extending across the lower center grille beneath the front license plate. Write: *MoPar Parts Division of Chrysler Corporation (M.A.), Detroit, Michigan.*

Booster Shot

A new lubricant for outboard motors and power mowers is now being marketed in a three-ounce round can. The "Booster Shot," according to the manufacturer, allows utilization of the engine's horsepower, keeps plugs clean and reduces friction. It is also said to increase gas mileage. Write: *The Pyroil Company, Inc. (M.A.), La Crosse, Wisconsin.*

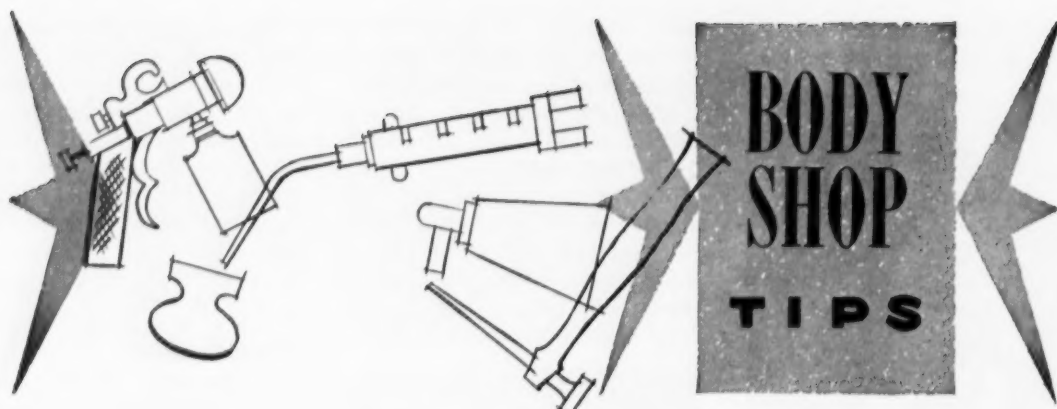
Battery Analyzer

A portable load-type 6/12 volt battery analyzer for both detached and in-the-vehicle battery testing is now being marketed. According to the manu-



facturer, the analyzer is equipped with testing prods, said to be adjustable for spanning the main posts of vehicle batteries. It is claimed that battery analysis is based upon a temperature compensated discharge-load, and that battery condition is calibrated on a 5½ inch, scale meter. The manufacturer states that a secondary scale, expanded to provide approximately ½ inch between

(Continued on page 112)



BODY SHOP TIPS are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

Way to Fix Stripped Window Regulator Gears

On 49-50 Ford convertibles and hardtops the window regulator gears sometime strip. If new ones aren't available the easiest way to fix the gears is to take the rivets out and rewind the gears on the mounting, to put the bad teeth out of the line of window travel. The gears always strip on the end where the glass would be raised up, making it very easy to move the gear a few degrees to miss these teeth. *James Blaser, Seigel's Garage, Cudahy, Wisconsin.*

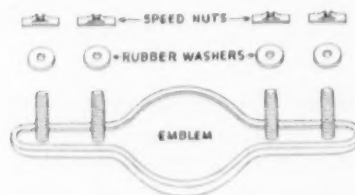
Tips on Cleaning Body Areas Prior to Refinishing

For cleaning body areas prior to refinishing, cut used abrasive

discs into pointed shapes and the edges will flex themselves down into depressed damaged areas. Let the tips of the spinning disc make light contact with the bent-in damaged metal. *Stanley Clark, Stanley Clark Service, Box 2162, East Bradenton, Florida.*

How to Keep Name Letters Tight After Replacement

In removing name letters and emblems for painting purposes,



it is difficult to keep them tight after replacement since the speed nut or lock often wears the threads. If rubber washers cut from an inner tube are inserted over the studs, they will give the speed nuts a new, tight gripping surface. *Harry J. Miller, 991 Forty-second Street, Sarasota, Florida.*

Grinder Used to Remove Rough Edges Before Weld

When it is necessary to splice a panel or fender, the panel cutter leaves a rough edge under the remaining panel. In a lap weld it prevents the lower panel from

lying flat. This situation is remedied by removing the disks and the backing from the grinder. Then the 24 or 36 close disk is applied with the grit side down and the backing plate over it. I then tighten it in the usual way. By doing this I am able to grind off the rough edge under the remaining panel, giving a better fit and a smoother job. *William Ottani, 10223 Bryson Ave., South Gate, California.*

Quick Method for Cleaning Chrome Car Trim

I have found a quick method of cleaning all the chrome around the car by using #0 fine steel wool pads. By using the steel wool pads it cuts our time in half. It leaves a high polish shine and it doesn't scratch the chrome moulding. *John Ragin, c/o Maggie's Shack Truck Body Co., 52-21 Van Dam Street, L. I. City, New York.*





Now...an extra capacity HOLGUN® geared to speed up tough jobs!



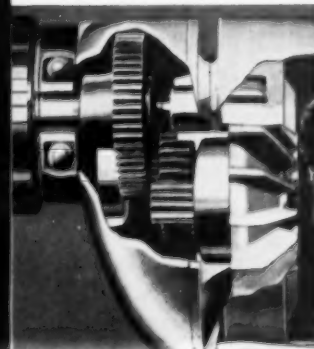
INSTALLING ACCESSORIES such as radio antenna, where larger holes are needed, is easier with this compact, extra-capacity drill.

THREE STAGE GEAR REDUCTION and low speed create tremendous torque in this handy drill.



REPLACING BODY MOLDING, you'll drill larger holes in jig time with the B&D 3/8" Holgun. No need to go to a bulkier tool.

PISTOL GRIP DESIGN, unique in a drill of this capacity, is perfect for close-quarter work.



New B&D 3/8" Heavy-Duty HOLGUN is POWER-BUILT for tremendous torque

The new Black & Decker 3/8" Heavy-Duty Holgun is specially geared and powered for your tougher jobs. Yet it's compact enough to work in close quarters around frame and chassis. And its light weight means easier handling on any job.

Ideal for continuous, non-stalling performance, this handy drill drives up to 3/8" twist drills, 3/4" wood augers, 1/2" masonry bits and 1 1/2" hole saws. You have your choice of 1,000 r.p.m. standard speed or 600 r.p.m. optional speed.

Try this *handful of power* at your nearby Black & Decker distributor. You'll find him listed in the Yellow Pages of your phone book. For detailed information on the world's most complete line of portable electric tools, write for free catalog No. 10 to: THE BLACK & DECKER MFG. Co., Dept. 5106, Towson 4, Maryland. (In Canada: 80-86 Fleet St., E., Toronto 2, Ontario.)



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Portable Electric Tools — Power-Built to set the pace



IMPACT
WRENCHES



WRENCHES



DRILLERS



VACUUM
CLEANERS

1957 New Passenger Car Registrations by Makes by States*

STATE AND MONTH	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Ford	Hudson	Lincoln	Mercury	Metropolitan	Nash	Oldsmobile	Packard	Plymouth	Pontiac	Rambler	Studebaker	Others	Total
Alabama	March 565	94	1994	118	63	216	1985	2	35	309	10	13	390	5	513	347	57	52	103	8,545
March 1504	288	5288	299	163	519	4965	12	78	787	20	29	1060	10	1348	679	144	147	210	17,727	
Arizona	March 214	88	565	37	73	594	2	28	149	9	6	252	132	47	32	42	14	2	964	
March 565	205	1933	164	85	109	2280	4	56	362	24	16	542	7	533	357	104	109	214	7,741	
Arkansas	March 181	58	803	30	26	145	915	4	17	183	1	1	206	4	313	290	32	28	20	3,196
March 971	221	3773	149	142	560	4432	10	78	802	2	14	446	8	1236	872	115	163	65	14,557	
California	March 3537	1787	11889	1687	969	2396	15042	59	607	3037	294	67	3615	56	5140	3132	628	492	3610	56,530
March 9667	4476	30391	3921	2463	5805	37101	183	1488	7585	611	215	8322	128	12794	8192	1801	1389	10079	147,372	
Colorado	March 339	104	1059	139	79	235	1192	11	24	240	10	16	263	11	548	237	112	52	92	4,774
March 987	325	1225	342	203	674	3379	38	91	644	24	54	960	28	1480	678	255	188	186	13,661	
Connecticut	March 565	149	1295	213	141	362	1490	8	12	232	24	19	387	13	701	466	139	65	290	16,554
March 1421	482	3803	533	365	921	4051	25	144	602	84	69	1221	25	1865	1215	284	211	689	17,900	
Delaware	March 170	57	582	61	36	99	583	3	24	129	1	3	182	2	319	167	20	17	28	2,460
March 403	99	1287	127	79	187	1285	3	49	233	2	6	342	2	648	395	36	50	62	5,279	
District of Columbia	March 139	74	490	78	40	113	485	5	17	90	2	3	157	1	273	188	27	10	101	2,283
March 333	262	1410	198	117	271	1345	9	44	227	8	4	430	7	704	373	62	32	209	8,535	
Florida	March 1224	683	4336	435	313	678	4224	22	223	782	82	21	1395	22	1758	791	199	114	827	18,609
March 3305	1830	12402	1683	833	2675	11441	82	581	1967	45	69	3330	43	4470	2049	483	377	1910	46,236	
Georgia	March 618	185	2594	156	72	310	2816	2	43	379	16	5	541	6	740	560	67	72	187	9,349
March 2085	529	8815	483	284	1041	9006	5	118	1171	45	47	1971	14	2354	1765	182	228	287	30,332	
Idaho	March 150	33	368	38	27	73	289	3	12	65	3	4	104	3	146	116	47	21	15	1,517
March 446	115	966	115	93	224	966	16	43	206	8	10	320	5	381	307	135	74	72	4,371	
Illinois	March 3141	997	8235	1027	737	1334	9431	34	282	1891	18	99	3064	57	3910	2367	642	431	779	39,476
March 9077	2942	25186	3022	2107	3538	25599	101	881	4937	42	379	7075	133	10942	6563	1770	1286	1621	108,132	
Indiana	March 1292	324	2943	360	263	583	2963	12	58	1138	3	26	1138	30	1369	913	144	82	454	12,944
March 3327	890	7961	873	780	1552	3812	44	244	1783	18	103	2787	49	3570	2141	389	689	310	37,512	
Iowa	March 632	122	1712	137	121	260	1787	8	32	337	3	13	454	10	670	406	102	86	83	6,885
March 1661	372	5149	415	338	469	5269	23	101	1076	4	51	1507	28	1652	1129	261	243	212	20,540	
Kansas	March 671	129	2921	188	189	316	2084	9	49	430	5	16	685	10	609	446	94	111	70	6,314
March 1352	342	4426	327	300	618	4527	30	105	888	12	52	1384	21	1996	985	226	213	144	17,524	
Kentucky	March 452	60	1511	193	68	176	1432	5	15	238	3	5	396	6	491	290	32	31	47	5,381
March 1288	226	3072	367	288	436	3264	19	58	708	6	18	1213	15	1383	819	433	328	182	12,049	
Louisiana	March 507	162	2376	129	112	362	2212	1	40	854	6	10	587	9	732	535	32	54	88	6,206
March 1558	451	7256	322	325	776	6953	6	110	1092	18	21	1706	19	2214	1620	93	184	172	25,036	
Maine	March 128	39	440	22	38	81	464	3	9	72	9	8	121	3	199	130	64	33	68	1,931
March 352	91	1063	49	67	206	1118	13	26	174	15	18	307	4	488	328	170	88	157	4,756	
Maryland	March 550	142	1926	227	169	519	2281	11	42	418	22	22	582	17	1386	570	73	98	236	9,263
March 1618	424	5571	640	472	1266	5858	26	120	1028	48	44	1584	39	3362	1545	216	294	443	24,566	
Massachusetts	March 1067	322	2642	373	291	578	3264	9	91	603	32	38	1162	12	1266	894	43	328	872	16,949
March 2828	689	6589	921	754	1410	7714	77	279	1490	64	101	2940	29	3527	2021	837	221	937	33,407	
Michigan	March 2728	1079	7096	848	820	1853	8755	31	233	2140	43	59	2315	27	4109	2023	487	237	568	35,450
March 7011	3299	19121	2262	2144	4491	23366	67	702	5194	99	157	6530	57	10133	4965	1189	686	1149	92,512	
Minnesota	March 951	186	2430	227	175	418	2831	11	68	577	4	33	946	11	1128	572	206	161	129	11,074
March 2451	671	6585	573	526	1201	7543	35	193	1514	8	125	2478	24	2752	1593	454	432	265	29,326	
Mississippi	March 309	64	1219	65	64	132	1132	2	23	189	1	2	277	5	426	257	19	39	33	4,258
March 1381	292	3562	171	146	340	3264	2	50	610	2	9	813	10	1032	694	43	328	82	12,049	
Missouri	March 1201	367	4909	386	381	723	4687	14	75	559	15	42	1210	20	2132	978	175	216	227	18,469
March 2583	776	10152	670	685	1369	9738	22	175	1599	20	77	2507	38	3964	1939	349	444	363	37,480	
Montana	March 178	38	409	50	42	99	464	7	12	102	6	5	145	3	190	101	64	20	51	1,966
March 440	127	1094	137	88	266	1151	20	27	255	13	17	403	11	456	239	137	74	150	5,105	
Nebraska	March 255	65	870	74	41	101	931	6	12	172	1	8	217	6	301	181	50	52	31	3,373
March 986	218	2773	215	114	328	2826	12	54	562	2	26	742	15	684	562	126	135	58	10,638	
Nevada	March 79	34	19	16	34	211	13	18	48	4	2	1	197	2	82	66	5	11	47	896
March 165	76	479	68	40	77	569	43	143	5	1	197	2	158	199	12	61	181	2,479		
New Hampshire	March 89	42	414	37	32	92	320	1	10	82	3	3	67	1	190	124	50	17	91	1,695
March 208	75	743	68	76	150	700	4	27	150	7	11	196	2	335	225	92	45	146	3,266	
New Jersey	March 1546	605	4360	880	701	1216	4564	30	263	972	17	22	1177	63	2620	1125	234	272	475	21,082
March 4244	1752	11852	2315	1824	3224	11942	66	522	2537	54	63	3338	118	6882	3140	672	708	1099	55,930	
New Mexico	March 63	28	253	23	15	29	238	6	83	1	1	8	98	7	79	74	10	13	18	1,021
March 300	79	1109	81	136	94	313	3	27	275	4	8	1	275	4	419	32	74	32	882	
New York	March 5824	2407	13811	3130	2154	4188	14370	68	703	3585	114	120	5526	102	8853	4152	952	686	2351	72,966
March 9821	3683	22257	4807	3379	6483	24396	142	1104	5445	163	222	8902	133	13747	6606	1510	1124	3768	117,490	
North Carolina	March 701	167	2019	167	122	323	2594	1	42	364	15	26	588	9	828	507	88	77	96	8,748
March 1975	478	6132	492	375	601	7448	16	124	1009	32	54	1725	26	2076	1395	225	253	236	24,672	
North Dakota	March 105	27	428	42	33	78	437	2	14	90	1	7	119	4	159	65	41	22	12	1,668
March 355	68	1425	129	100	260	1466	10	34	244	1	29	360	10	428	218	88	63	29	5,353	
Ohio	March 3367	629	8852	1070	672	2183	2973	60	231	2953	48	71	2933	60	4467	2435	619	538	82	34,862
March 8478	2453	20443	2638	2344	5715	24509	129	680	4952	97	217	7190	130	10918	6037	905	929	1147	100,077	
Oklahoma	March 418	126	1566	99	102	336	1792	9	38	322	7	10	448	7	620	339	66	59	89	6,350
March 1034	335	3726	209	258	469	4172	12	74	693	5	22	1099	16	1370	777	115	129	167	14,642	
Oregon	March 368	122	1503	119	119	231	1381	11	45	254	20	15	349	8	464	342	108	76	305	5,845
March 1667	358	4046	334	400	855	3744	23	141	710											

PATENTED "KISS" WORTH 50,000 EXTRA MILES!

New tread invention makes
Armstrong Miracle S-D Tires
roll instead of scuff . . .
to set amazing over-the-road
mileage records!


When you run *your* first tests on these sensational new tires, be prepared for a pleasant surprise. They'll probably show up to 50,000 miles more than you normally expect, before recapping! That's the actual experience of truckers who have used them.

The reason is — these tires "kiss the road". Tire engineers have long known that while a tire *rolls* freely, tread wear is negligible. But when tread is dragged, even a fraction of an inch, scuffing causes rapid wear.

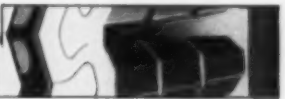
Miracle S-D Tires lick scuffing two exclusive, patented ways. Interlocking sipes (see diagram) let the tread "kiss" the road hello and goodbye. Intratread bumpers prevent "rocking" — add stability so that the deep treads can't weave. The effect on mileage is phenomenal . . . and drivers love the improved traction and steering. Let us give you the facts and arrange a test.

ARMSTRONG MIRACLE S-D TRUCK TIRES

The Armstrong Rubber Co.,
Home Office,
West Haven, Conn.



**EXCLUSIVE
INTRATREAD BUMPERS**
prevent the deep tread
from weaving under load
or braking pressure,
greatly reduce *side-to-side*
scuffing.



**EXCLUSIVE
INTERLOCKING SIPES**
grip the road in all direc-
tions; yet "kiss" the road
and leave it without *fore-*
and-aft scuffing.



KISSES THE ROAD

**\$
25**

FOR THE KINK
OF THE MONTH

TIME AND WORK SAVING IDEAS ON CARS AND

SHOP KINKS

TRUCKS CAN PAY OFF. SEND YOURS IN NOW!

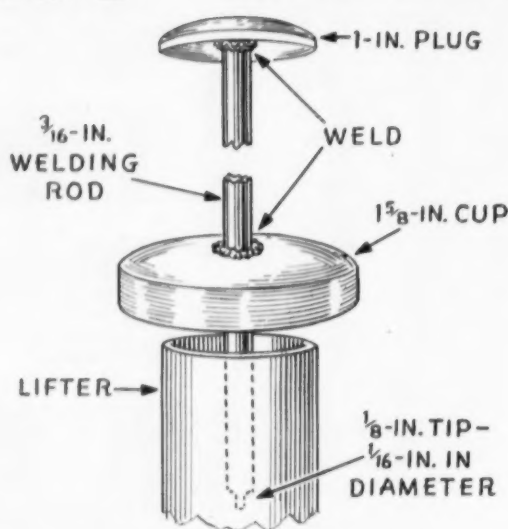
**\$
7.50**

FOR EACH
KINK PAID

\$25

KINK OF THE MONTH

Tool For Cleaning
Hydraulic Lifters



Here is a tool for cleaning hydraulic lifters without getting your hands in the solvent. This tool is made from a piece of 3/16 inch welding rod, a 1 inch expansion plug for a handle, a 1 5/8 inch cup type expansion plug for a shield. Weld one end of the rod to the 1 inch expansion plug. Drill a 3 1/16 inch hole in the center of the cup type expansion plug and position it so it will clear the top of the lifter about 1/2 inch. Grind the tip end of the rod as shown so it will force the lifter ball off its seat, with the push rod seat removed from the lifter. The plunger may be pumped up and down while the lifter is in a pan of solvent. *Floyd M. Fike, Fike Motor Service, 119 S. Baylor Street, Perryton, Texas.*

Cleaning Bleed Holes Prevents Flooding

Fords and Mercurys using four-barrel carburetors may encounter stalling and consequent hard starting after runs involving secondary throttle operation. Such trouble is often caused by severe flooding, in the secondary throttle bores, resulting from plugged bleed holes (.28") located in the float bowl cover directly below the large washer held in place by air cleaner hold-down studs. These secondary bleed holes may be easily cleaned by inserting a #70 drill or similar size wire. It is not necessary to remove the bowl cover for this operation. *V. L. Bemis, Bemis Auto Service, 1132 No. Belevedere Ave., Tucson, Arizona.*

Changing Exhaust Pipe Gaskets Without Raising Car

I have devised a tool to save mechanics time when changing the exhaust pipe gaskets on a 1955 or 1956 Plymouth V-8 with dual exhausts. This tool is for use on the left hand pipe. By using this tool you eliminate having to raise the car, because the clutch torque shaft is so close to the engine pipe. I have taken a 9-inch, 5/8 by 11/16 box wrench and heated it in a vise 1 3/4 inches from the 11/16 end. I bent this
(Continued on page 70)

are Your
Customers'
Engines
tired out, too?

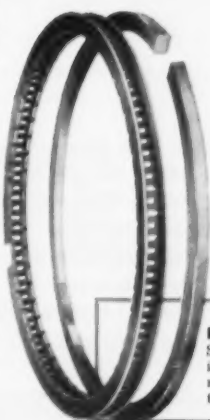


restore that
New Car
Feel *to tired engines with*



Perfect Circle national ads are telling your neighbors that YOU are the logical man to see to wake up the "sleeping" power of their cars! We're telling them that you, their Doctor of Motors, know how to put new life into tired engines and bring back that wanted "New Car Feel".

When your overhaul jobs include Perfect Circle 2-in-1 Chrome sets you can be sure of satisfied customers. Perfect Circle 2-in-1 Chrome piston rings *more than double* the life of cylinders, pistons and rings because BOTH the top compression ring and the oil ring are plated with thick, wear-resisting solid chrome. Seat faster, too, because they are lapped in at the factory. So for longer life, sustained power and lasting oil economy, install PC 2-in-1 Chrome sets and be sure! Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., 888 Don Mills Road, Don Mills, Ontario.



**PERFECT
CIRCLE**

2-IN-1 CHROME PISTON RINGS

*double the life of
cylinders, pistons and rings*

DON'T MISS YOUR DOCTOR OF MOTORS CLINIC!

Sponsored by your PC Jobber, the Doctor of Motors Clinic is packed with facts of great value to you. Plan to attend the next one. For your added interest and enjoyment, you'll see the exciting movie of the latest Indianapolis 500-Mile Race.

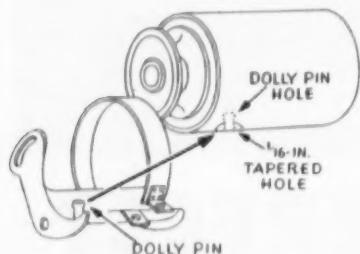
at an angle to fit between the clutch torque shaft and the engine pipe. This will enable you to reach the engine pipe nuts from under the hood. *Walter Gardner, Shop Foreman, Gardner's Garage, 182 Main Street, Hoosick Falls, New York.*

How to Get 6 and 12 Volt Service Out of One Battery

In a shop where both 6 and 12 volt service batteries are used, I find one 12 volt battery can be used. By putting a battery post on the bar between the two center cells and using snap-on battery cables, we get 6 and 12 volt service out of one 12 volt battery. *John C. Krenik, 315 South Cordova, Le Center, Minnesota.*

Sliding Dolly Pin Into Generator Housing Hole

I have found that I can save time by drilling a 1/16 inch tapered hole in a generator housing of a Ford Generator by using



a 1/2 inch tapered drill. This tapering causes the dolly pin to slide easily into the housing hole. *Charles Pinotti, East Chestnut Avenue, Vineland, New Jersey.*

Checking Distributor Head and Spark Plug Wires

I have found an easy and quick way to check distributor head and spark plug wires. I use

a neon sign transformer to supply high voltage and plug to secondary leads into adjacent plug holes and go around in firing order. The crack will show up by the current arc and smoke. I check plug wires by grounding one transformer wire and pulling the plug wire from the distributor and connecting it to the other and leaving the wire off the plug and that end open. If it is shorted it will arc and smoke making it easy to find. *Les Boyer Auto Shop, Hematite, Missouri.*

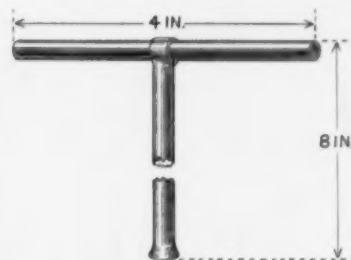
Gasoline Used to Locate Pin Hole Leaks Around Tube

When looking for pin holes or leaks around patches previously installed, try squirting gasoline around the tube or patches. I have used this method many times and find that I can locate leaks which would never show up with the tube submerged in water, even under extreme pressure. *L. M. Creamer, Creamer Motor Company, Smith Center, Kansas.*

Installing Detent Ball in Transmission

Here is a simple tool I made for installing detent ball in Ford-O-Matic and Merc-O-Matic transmissions. It is an 8 inch piece of steel tubing flare with

one end flatter than the other end. This flat end wraps around



a 4 inch pipe and is welded on to become the handle of the tool. *William Stockham, Corner Service Center, 401 East Erie Street, Linesville, Pennsylvania.*

Changing Generator Pulleys Without Removing Generator

I made a tool for changing generator pulleys without removing the generator from the car. With this tool there is no danger of bending fins on the pulley or damaging the armature. All that is needed to make one of these tools is a piece of wood 12 x 3/4 x 2 inches, a discarded fan belt and four nails. You cut the fan belt open and nail the stick to it. Then cut a notch further back on the stick. To use this tool, remove the original fan belt from the pulley, pass the one nailed to the stick around the pulley and pull it tight. Hook it on the notch and hold with your hand and begin loosening the pulley nut. *Edward Grant, Route 2, Dubuque, Iowa.*

If you have an original idea for a special tool, a short cut on a job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

WHICH CABINET FITS YOUR OPERATION?



Large cabinet is 24" wide, 12" deep and 42½" high. Comes complete with Auto-Lite Parts Catalog and Cross Reference Book, AEA Fast-Moving-Parts Book, and Price Book. Places you on mailing list for latest technical and service information.

Wall cabinet is 20" wide by 6" deep and 25" high. Comes complete with Auto-Lite Parts Catalog and Cross Reference Book, Price Book, and Wall Chart. Places you on mailing list for latest technical and service information.



New Electrical Service Parts Cabinet Program for Small Operations

Here's the Wall Cabinet, the second in the Auto-Lite Electrical Service Parts Cabinet Program, which is tailored for smaller operations where only a limited stock of parts is required. This cabinet is in addition to the large cabinet designed for operations requiring a larger stock of electrical service parts.

Both cabinets are designed as part of an entire program to save you time, money, and trouble because it reduces inventories and simplifies stocking of your fast-moving electrical parts. Makes you eligible for Auto-Lite Service Technicians

Training Course. To find out how you can get either of these attractive parts cabinets, see your Auto-Lite Parts supplier today!

**Now it's easier than ever
to order Auto-Lite Original Service Parts**

Auto-Lite now has the simplest parts numbering system in history. The new system is part of the extensive Auto-Lite Standardization and Simplification Program that makes stocking and ordering of electrical service parts easy.

AUTO-LITE®
ORIGINAL
SERVICE PARTS



THE ELECTRIC AUTO-LITE COMPANY • TOLEDO 1, OHIO

Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of May 21, 1957.
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL					BODY MAKE AND MODEL					BODY MAKE AND MODEL					BODY MAKE AND MODEL																																																																
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Federal Taxes and Handling Charges					Federal Taxes and Handling Charges					Federal Taxes and Handling Charges					Federal Taxes and Handling Charges																																																																
Delivered Price at Factory including Federal Taxes					Delivered Price at Factory including Federal Taxes					Delivered Price at Factory including Federal Taxes					Delivered Price at Factory including Federal Taxes																																																																
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HUDSON					DODGE, Cont'd					LINCOLN					CHEVROLET, Cont'd																																																																
Super					Coronet V8					Sedan, 4d					Sedan, 4d																																																																
Sedan, 4d					Club Sedan					Coupe					Sport Coupe																																																																
Hollywood, 2d					Sedan, 4d					Sedan, 4d					Sedan, 4d																																																																
Custom					Lancer, 4d					Hardtop, 4d					Sta. Wag., 2d																																																																
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					Sunliner																																																																										
					Sta. Wagon V8																																																																										
					Ranch																																																																										
					Del Rio																																																																										
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					Coronet 6																																																																										
					Club Sedan																																																																										
					Sedan, 4d																																																																										

TOP NAME

in the chassis lubrication field



"Brings me lots of extra business"

**More than
650 million pounds
of Marfak
have been sold.**

Texaco *Marfak* represents the top in chassis lubricant quality. No other chassis lubricant matches it in performance, and no other chassis lubricant has been so heavily advertised and promoted.

No other chassis lubricant does so good a job at pulling in customers and bringing them back. You know what that means. It leads to more sales of oil changes, tires, batteries and other items... for Texaco Dealers in all 48 states.

THE TEXAS COMPANY



No wonder TEXACO DEALERS are such busy dealers!



A scroll paying tribute to Dean T. O. McLaughlin was presented (see photo at left) during the graduation exercises at the 45th session of the Chevrolet "Modern Merchandising and Management" school. Presenting gift are (left to right): Henry Pasching, K. F. Ruddy, and R. B. O'Reilly. McLaughlin is at the far left. He has directed the school since its inception in 1938.

Sun Electric Holds Day & Night Courses

Courses in test equipment operation, automotive electrical theory, and engine tune-up are attracting more and more service station operators from all over the country according to a report from Sun Electric Corp. in Chicago. Sun not only operates a school for tune-up at its factory in Chicago, but many of its 300 field representatives conduct field courses in various parts of the country.

Both day and night courses are available at Sun's [Chicago] Training Center. Day classes are one week in length and evening classes require 4 weeks for completion. Subjects taught include the use of all modern engine test equipment. Special attention will be given in this month and later classes to the use of Sun's new engine oscilloscope for trouble-shooting.

STOPS VAPOR LOCK!
gives instant starts in any weather!
STEWART-WARNER
ELECTRIC FUEL PUMP

for trucks, busses, cars!

- ★ Operates independently of engine to assure positive flow of gas—always!
- ★ No bellows or rocker arms to wear!
- ★ Heavy-duty construction. Weatherized finish, in bright green baked enamel.
- ★ Models with single or dual pumps!
- ★ Pump may be mounted under hood, on fire wall or fender panel, or on frame near gas tank.

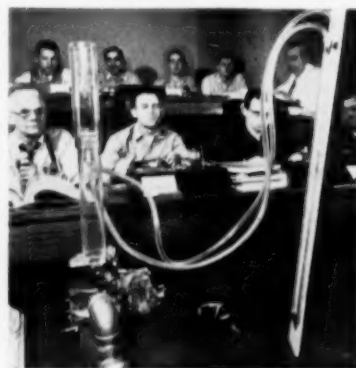
STEWART-WARNER

Instrument Division, Dept. AD-67
 1840 Diversey Parkway, Chicago 14, Illinois



**STEWART
SW
WARNER**

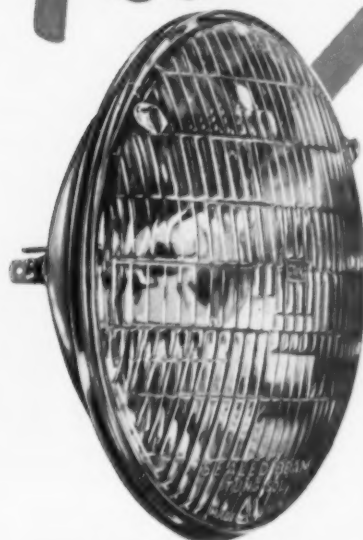
See Your Jobber Today!



Classroom scene at the Carter Carburetor factory school in St. Louis. Instructor Roy Dean is shown at upper right.

FOR TOP PROFITS IN LAMPS

Push TUNG-SOL



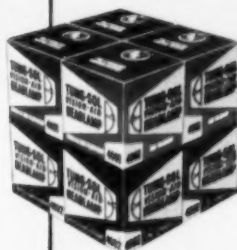
Standard 7-inch type:
5040-S (6-volt) and 5400-S (12-volt).

Special For Your Fleet Accounts

Ruggedized 5440-S has exclusive design features to meet toughest service conditions. It will get you a lot of fleet business. (Also, special miniature types designed for truck and bus use.)

VISION-AID HEADLAMPS

Fully up to every design specification for modern driving conditions.



NEW! FOR 4-HEADLIGHT CARS

The 5 1/4-inch, 4001 and 4002 12-volt lamps. 4001 has single high beam filament. 4002 has double (high and low beam) filament.

Special Introductory Package For 4-Headlight Car Service. Low-cost introductory package contains four each 4001 and 4002 5 1/4-inch Vision-Aid Headlamps. Just what you need to take care of immediate service requirements.

FLASHERS

Almost universally used for original equipment. Every dealer should stock Tung-Sol Flashers to make lighting service complete. No. P229D Universal Flasher replaces nearly every specially mounted 6-volt flasher. No. 6 assortment will take care of 85% of all your replacement requirements.



MINIATURE LAMPS

Packaged for your convenience to boost on-the-spot sales. Both 6-volt (No. 100) and 12-volt (No. 70) assortments. Sturdy plastic cabinets keep stock orderly and last and last for other handy uses.

CHECK THOSE LIGHTS!

Inspection reports show faulty lighting is on the increase! Urge your customers to have their lights checked. Make light inspection part of your Spring and Fall service specials.



TUNG-SOL®

VISION-AID HEADLAMPS • MINIATURE LAMPS • SIGNAL FLASHERS

TUNG-SOL ELECTRIC INC., Newark 4, N. J.

New Local Units Formed in Calif.

New local units of IGO of California have been formed in San Diego, Fresno, Modesto, Stockton, Santa Rosa and Ventura, it was announced by the Association's State President, Jack Gilchrist. These units are the beginning of a statewide organizational expansion program

launched in January 1957, he added.

The California IGO group is holding a state convention at the Lafayette Hotel in Long Beach, June 14th and 15th. Twelve new Directors will be elected.

Minnesota Chapter

A special meeting of the "Independent Garagemen's Asso-

ciation" of St. Paul was held at the Jr. Pioneer Hall recently in St. Paul, Minn. More than fifty independent garages were represented.

Officers of the St. Paul unit are: President — Tom Hitchcock, St. Paul Motor Service Company, 170 Smith Avenue. — Vice - President, Raymond Slomkovski, Raymonds Auto Body, 746 Selby Avenue—Secretary and Treasurer, George Lamson, Smith Service, 1646 Grand Avenue.

Ralph James, Executive Director of IGO-America, spoke on the national association and the benefits of a National Garagemen Association.

A DRUM FULL OF ADVANTAGES



A PRODUCT OF THE
KENDALL REFINING COMPANY
BRADFORD, PENNA.

Lubrication Specialists since 1881



Alabama Setting Up State Association

A meeting was held in Montgomery recently by Alabama members of IGO. Purpose was to form a State Association and elect officers. Three associations were represented [Birmingham, Bessemer, and Montgomery] and the following officers were elected:

Walter Boyette, Montgomery, President; L. E. England, Birmingham, Vice President; E. E. Brooks, Birmingham, Secretary; and Roy Farrington, Bessemer, Chairman of Board of Directors.

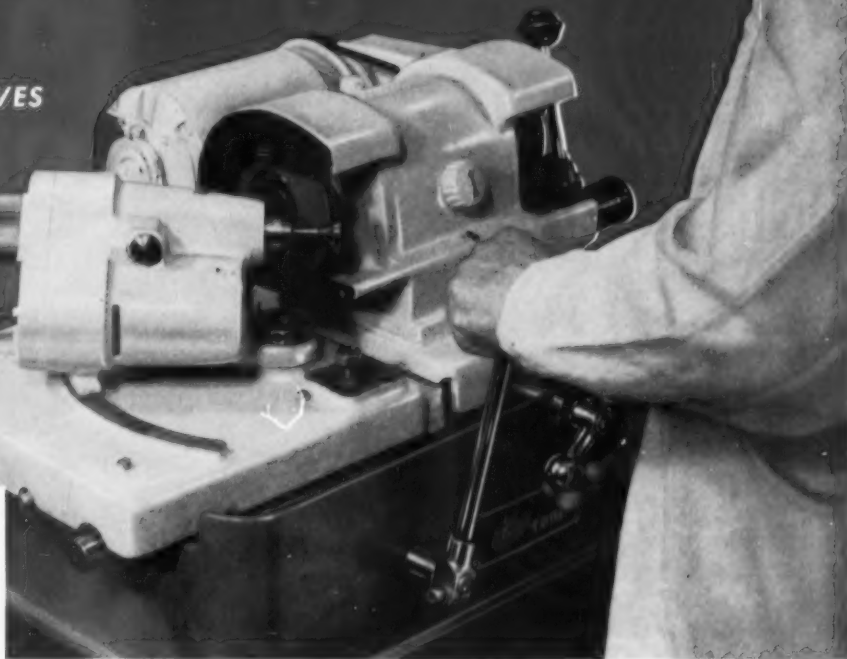
Members for the State Board of Directors will be appointed in equal numbers from the various chapters throughout the state of Alabama. The office of this State Association will be in Montgomery, Alabama. The name selected is the Independent Garage Owners of Alabama.

Announcing an all-new **THOR VALVE-REFACER**

STREAMLINED

**GRINDS THE
SMOOTHEST VALVES
IN TOWN**

All Thor automotive
air and electric tools
can be purchased on
an easy payment plan.



Precision engineered for smoother valve jobs! Simple operation! No vibration!

If you grind valves you *know* that it takes far more than just a perfectly dressed wheel to produce mirror finishes.

You need a valve refacer that is designed to deliver smooth, vibrationless power at efficient surface grinding speed . . . and here it is! The completely all-new Thor Series 300 Valve Refacers, packed solid with *machine tool* features:

Precision machined wheel spindle is mounted in enclosed temperature compensated ball bearings. All sealed ball bearings are spring loaded to maintain perfect alignment.

Pre-stressed and balanced V-Belt drives in wheel head and pump eliminate vibration. Advanced type V-Belt in valve head assures smooth, chatter-free finishes.

Highly efficient coolant pump is free running, high capacity, and located below slide rod

mountings to eliminate vibration. Two-way coolant control operates from a single valve . . . offers efficient control from light to full flow . . . coolant channels totally enclosed to eliminate tubing.

Thor's new, fast action chuck control allows you to change valves with a one-quarter turn. Micrometer indicator dial on the grinder head's $\frac{1}{4}$ " feed screw mounting permits positive, close tolerance control.

See for yourself, right in your own shop. Ask your Thor jobber for a demonstration. Put a new Thor on your valve jobs for more profits. Thor Power Tool Company, Prudential Plaza, Chicago 1, Illinois.



THOR POWER TOOL COMPANY, CHICAGO

Branches in all principal cities

NOW! ONE MAN can handle any heavy duty truck transmission!

**Announcing the
revolutionary new**

WALKER NO. 49 UNI-CRADLE JACK



**for ALL truck transmissions,
torque converters, differentials!**

Slash servicing time and costs as much as 60%

Take those extra men off heavy duty truck transmission jobs! For the first time, one man—and one man alone—can handle any transmission removal or installation, thanks to the new Walker Uni-Cradle.

Two unique Walker-developed features make the difference: side control design and the revolutionary tilt control that moves a transmission as little as a hair, as much as 10° off center in any direction—front, back, right or left! The head pitches forward and backward for spline alignment, tilts to either side for dowel pin and bolt alignment!

As for the side controls: notice how the elevating wheel is placed so the operator can visually align the pilot shaft and still be in comfortable reach of *all* controls. From one position, he can quickly and easily tilt . . . lower . . . elevate the unit.

In short, the revolutionary Walker No. 49 Uni-Cradle means man hours saved, man-sized profits made!

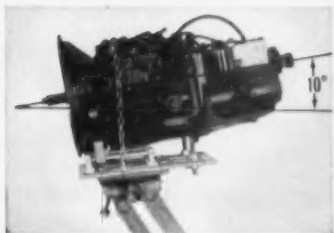
And—just look what the new no. 49 can do!

- **Service all types of heavy duty transmissions, torque converters, differentials, rear end and engine assemblies!**
- **With just one universal lifting head, handle all types of heavy duty truck transmissions (except Allison Torqmatic types which are held with a quickly-installed adaptor head)!**

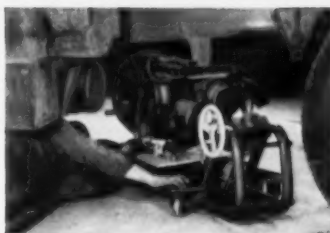
*Designed, engineered and built by
the world's largest maker of Jacks*

WALKER

Only the unique Walker No. 49 gives you all these features:



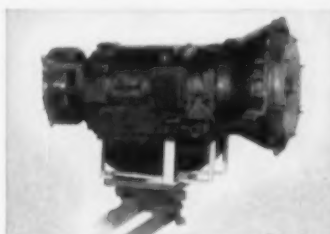
Lifting head provides for 10° tilt forward, backwards and to each side. Micro-accurate elevating and tilting adjustments for easy removal and re-installation.



Seven-and-a-half inch height at lowered position and extra large ball bearing wheels for easy, quick dollying in tight under-truck spaces.



Adaptor handles all types of truck differentials (except top mounted)—including double reduction, two-speed and forward drive units of tandem rear ends.



Adaptor for Allison Transmissions goes into place in a jiffy, handles Chevrolet Powermatic and Ford Transmatic with the greatest precision and ease.

PLUS...

- ✓ **ADJUSTABLE HEAD** pitches forward and backward for spline alignment, tilts for dowel pin and bolt alignment.
- ✓ **SAGINAW BALL BEARING ELEVATING SCREW** with 3-to-1 gear reduction built-in guarantees extremely low handle effort—only 23 lbs. for a full 2,000 lb. load.
- ✓ **POSITIVE SAFETY BRAKING** device automatically locks twin pawls in place to hold loads safely at any height. Device has nothing to get out of order, is built to last a lifetime.
- ✓ **TUBULAR FRAME** construction gives the No. 49 maximum strength with minimum weight—as well as maximum stability.
- ✓ **LARGE DIAMETER** hard-core synthetic rubber, roller bearing wheels are mounted in ball bearing caster assemblies.
- ✓ **POSITIVE LOCKING** of transmission and differentials to the jack means absolute safety.
- ✓ **FREE-ROLLING** wheel design makes positioning extremely easy even under maximum load.
- ✓ **SELF-ADJUSTING CRESCENTS** cradle the transmission close to its center of gravity. Contour of these crescents follows the case contour, providing a wide-spread contact that insures against damage.

JACKS

Walker Marketing Corporation, Racine, Wisconsin, a subsidiary of
WALKER MANUFACTURING COMPANY OF WISCONSIN

Air Conditioning • • • Continued from page 45

Rhodes office and collects from the dealer.

"Eventually we are going to have to work out some credit arrangement," Mr. Rhodes says, "but until now our local banks have not offered a payment plan. We believe they will soon. A practical installment purchase

plan would help materially to sell units to owners of late model cars. Of course when a man buys a new car and has air conditioning installed at the time, the price of the unit may be added to his regular car notes."

Mr. Rhodes finds that the average garage owner or dealer

can start an air conditioning sales and service for no more than \$1,000 additional investment, depending on the tools and equipment already in the shop. Space needed for the air conditioning department is negligible—only enough for parking a car, a short work-bench and area for tanks and special equipment.

Main special equipment needed, he says, includes a freon gas tank, thermometer (for checking refrigeration output), leak detector, testing unit, vacuum pump leak detector, gas tank.

He sells air conditioning units and service through advertising and personal contact. He uses local newspaper space and an occasional spot on the two local

**NEVER SO MUCH
BRAKE DRUM
LATHE
FOR SO LITTLE
MONEY!**

**Dealers—
it's NEW
and for you!**

**NEW—
NO. 304**

Designed for Precision Machining Brake Drums on Passenger cars and Trucks UP TO 10 TONS!

Sliding and Revolving solid Spindle — 3" Diameter . . . cuts set-up time.

12" Spindle travel gives easier access to drum interior.

Multiple speeds and independent feeds. 1 HP Motor.

Turns AND Wet Grinds, SIMULTANEOUSLY, with Vapo-Jet WET Grinder attachment.

There are 2 certain ways to make steady, big profits in today's great demand for Brake Drum Reconditioning! 1) Put this new, medium priced Lathe to work for YOU! Or, 2) take your Brake Drum work to a VAN NORMAN Jobber's Shop that is equipped to turn out these jobs quickly and inexpensively for you. This great, new No. 304 Lathe provides the precision, mirror finish that means maximum life to linings.

An easy, "Pay-as-You-Profit Plan" will put this medium priced Lathe to work for you. Ask your Jobber about the new Heavy Duty No. 304, or write us and we'll tell you where you can get Precision Machining Brake Drum service — from a Shop near you. Van Norman Automotive Equipment Company, Springfield 7, Mass. A Division of Van Norman Industries, Inc.

VAN NORMAN

PRECISION
VAN NORMAN IN MODERN, EFFICIENT SHOPS—EVERYWHERE!
MACHINING

If there is anyone whom you dislike, he is a person of whom you should never speak.

radio stations. His best source of prospects for new units are the owners of late-model cars who bring them in for mechanical service. When he has such a customer, he talks air conditioning. Also, an occasional sale of a new unit goes to a car owner whose old unit is about worn out, although this is not a primary field for the average unit lasts as long as the car.

He follows up personally all genuine leads obtained from advertising. This means going to a man's home or office when advisable, to induce him to bring his car in for an installation.

A window display features air conditioning throughout the year. The display shows a new unit and a cut-out featuring one manufacturer's line. He switches from one line to another in order to give both his lines equal opportunity.

Racetrack — a place where windows clean people.

It pays 2 ways to

CHECK THE BELTS

To find belt wear always turn belt over

A belt may look all right on top but it's the *underside* that tells the story.

Belts that have any of the following signs of wear should be replaced.

CRACKED:

Cracks on *underside* are dangerous. Belt may snap suddenly.



GREASY:

Note the grease-softened undercore and slick sidewalls. Aside from danger of slippage, such belts go to pieces rapidly.



GLAZED:

Slick, glazed sidewalls may cause belt to slip badly. Result: low battery and overheating.



PEELING:

Sections of undercore (underside) often peel and break off. Belt runs rough—may fail.



SPLIT:

Signs of "fraying" may indicate split in sidewall. Split belts don't ride pulleys properly—may cause sudden trouble.



For their protection and your own profit, don't let good customers take chances with V-belts that should be replaced.

In modern cars, with V-belts driving not only fan, water pump and generator but air-conditioning and power steering as well, the threat of trouble on the road from belt failure is real—and serious. It pays to do your part in preventing such failures—pays in dollars of extra profits and in continued customer satisfaction. Make it a *must* to check the belts every time a hood is up. It's easy and quick enough.

REPLACEMENTS ARE EASY—BECAUSE GATES BELTS FIT RIGHT.

There is a Gates V-Belt for each make and model car—every one *precisely engineered* by the *World's Largest Maker of V-Belts* to fit correctly and perform efficiently. Your customers know that this famous name is their guarantee of quality.



Gates Vulco V-Belts



Phone your jobber
for handy display rack

The Gates display rack holds belts for all popular model cars, keeps your stock in clean condition and within convenient reach. Your jobber will supply replacements promptly. Just give him a ring. The Gates Rubber Co., Denver, Colo.
—World's Largest Maker of V-Belts.



Just carry Genuine Ford Parts...and let Ford owners know
it by hanging the new **FoMoCo** sign and displaying the
"Travelize Service" point-of-sale material

Ford owners are pre-sold on keeping their Fords *all* Ford... with Genuine Ford Parts.

And this summer they'll be more aware of Genuine Ford Parts than ever. A summer-long campaign in *Life*, *Reader's Digest* and *This Week Magazine* will remind Ford owners to get a *Genuine Ford* "Travelize Check-up" before they leave on vacation.

Where? Where they see the FoMoCo sign displayed, of course! There they can get

Genuine Ford Parts—the parts made right, to work right, to keep the fun in Fords.

If you'd like to cash in on these ads and pull in more Ford vacation business than ever—better get that new FoMoCo sign up pronto. See your Ford Dealer or send in the coupon below and get your sign... plus extra point-of-sale material. Nothing to it!

And be sure you have plenty of Genuine Ford Parts on hand this summer.

It's
FREE



PARTS AND SERVICE SALES PROMOTION DEPT.

Ford Division, Ford Motor Company, Box 658, Dearborn, Mich.

Please send complete information telling me how independent garages can get a Genuine Ford Parts sign. I'd like to cash in on this, too!

FIRM NAME _____

INDIVIDUAL'S NAME _____

ADDRESS _____

CITY _____ STATE _____ H-6

to make their first stop...
...your shop!



Foreign Cars Continued from page 47

Body shops have no real problem unless they run into mechanical troubles along with sheet metal and paint work. Undercoating requires nothing in the way of new equipment. Radiator and other cooling system parts can be readily fixed by regular means. Naturally, all glass re-

pairs can be handled quite easily. Wheel balance is another item where the shop shouldn't have any problems. These are just some of the things that can be done to the foreign makes with equipment already on hand. All Ford of England cars can be handled with American tools since

they are built to our standards.

The parts situation is another problem that the foreign car people are most concerned with and one which some have gone to great lengths to solve. Basic parts for the foreign makes are not interchangeable with American makes. Volkswagen, for example, has 15 parts depots in strategic locations throughout the U. S. These warehouses have approximately \$12 million worth of parts at the retail level. One of the big salespoints here is



Their safety depends on you!

More horsepower under the hood makes it more important than ever that your customers be able to stop suddenly and safely. That's why many state laws already demand the use of heavy duty brake fluids. And Puritan Super 60 meets or exceeds these and all other vital SAE specifications:

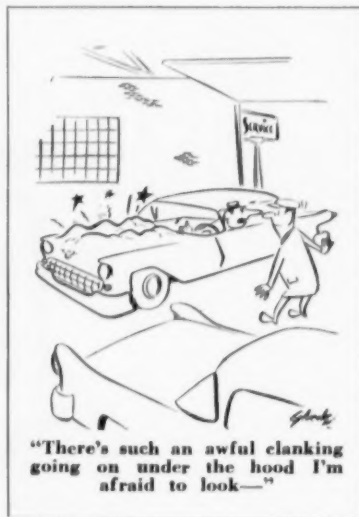
- **Highest Heat Resistance**—safety margin of up to 400° F.
- **Highest Rust Resistance**—fortified with chemical inhibitors.
- **Resistance to Thickening and Thinning**—at both high and low temperatures.
- **Chemically Stable**—won't break down. Always gives safe, sure stops.
- **Compatibility**—readily mixes with other brake fluids.

Make sure you're safe—that your customers are safe! Make sure they use Puritan Super 60 Heavy Duty Brake Fluid.



OLIN MATHIESON CHEMICAL CORPORATION

Automotive Products Department • Baltimore 3, Maryland



that since the VW does not change from year to year that this constitutes a comprehensive stock of parts per vehicle sold. In addition, each of the 350 to 400 VW dealers in the states maintains a stock parts as prescribed by the factory.

Ford of England keeps \$1 million worth of parts at Dearborn in a section of the huge Ford warehouse. Each of its 500 dealers, mostly on each coast line, keep a minimum of \$850 in parts and \$350 in tools for service. This firm has no U. S. distributors.

Hambro Motors, which handles all British Motor Corp. cars in the states, has 12 distributors and 500 dealers. Major parts depots are in New York and San

(Continued on page 86)

for modernization..that pays off

the **NEW** Ingersoll-Rand

Channel Flo

... a motorcompressor designed to meet the specific needs of today's modern service station and repair shop.

it's compact

A Channel-flo requires less than half the installation space of a tank-mounted, belt-driven compressor of comparable size.

it's efficient

Balanced opposed-piston construction with the time-tested I-R Channel Valve means better performance with greater economy. The compressor is mounted directly on the motor shaft, completely eliminating main bearings.

it's modern

There are no belts or couplings so a guard is not required. The new Channel-flo is safe, reliable and completely new.

it's economical

Moderate first cost, minimum maintenance, low-cost operation, continuous service rating... are just some of the reasons why the I-R Channel-flo should be your top choice for a dependable air supply.



Get in touch with your local Ingersoll-Rand Jobber or write direct to Ingersoll-Rand for complete data on the powerful new Channel-flo. Available in 1½ or 2 hp sizes—Two stage—rated 200#

Ingersoll-Rand
11 Broadway, New York 4, N.Y.



3 578

Francisco where the firm has 80 per cent of the parts on hand. It is of interest that Hambro provides a 12-month parts warranty on all cars. Part sales this year will run something over \$4 million at retail.

Renault tells us that the firm will sell \$2 million worth of re-

placement parts in the U. S. this year. With the exception of sealed beam headlights and tires—this is true of most all foreign cars—all Renault parts come in from France. Renault has 15 regional distributors supplied by a central warehouse in Brooklyn. The Brooklyn depot stocks over

8000 different items which are available on one days' notice. In addition, Renault has a network of 325 dealers maintaining a minimum parts supply.

Courtesy Discount

Most all of the foreign car importers claim that they are not interested in having their parts handled across the board by automotive jobbers or wholesalers. For the most part, they suggest that their dealers give

You'll be proud of your Brake Service when you use



THE FINEST IN BRAKE PARTS!

A brake job can only be as good as the parts that go into it. Why not do the best job possible by using EIS—THE FINEST IN BRAKE PARTS?

USE EIS "E" SERIES CUPS AND EXPANDERS in all your wheel cylinder work. They're made of a new, heat-resisting compound, yet remain flexible at 40° below zero! Most 1956-57 cars come equipped with Expanders. Higher speeds and quicker stops make EIS "E" Series Cups and Expanders necessary on all jobs. EIS Wheel Cylinders come equipped with them.

On many trucks using "U" Ring Cups, USE EIS CHANGEOVER RINGS AND CYLINDERS. They contain new type pistons, plain cups and expanders. EIS cylinders are also fitted with the new and shorter push rods.

USE EIS PATENTED RIBBED CUPS on all Chrysler Products up to 1956—also on many trucks using "U" Ring Cups. They've been doing a better sealing job for years! All EIS Master Cylinders are furnished with ribbed secondary cups.

ORDER FROM YOUR EIS DISTRIBUTOR OR WRITE FOR CATALOG DESCRIBING "THE COMPLETE BRAKE PARTS LINE!"

EIS AUTOMOTIVE CORP., Middletown, Conn.

Never take upon yourself the burden of hatred. It is a heavier load than you think.

a courtesy discount of at least 20 per cent when dealing with the rest of the trade.

One foreign parts maker, Lucas, has set up two depots and over 2000 outlets handling parts in the U. S. for most foreign cars. U. S. parts makers cannot economically produce replacement or repair parts for most foreign makes. There just aren't enough of them on the streets to make it worthwhile. Volkswagen is another story, however. At the end of this year, roughly 200,000 VWs will have been sold in this country.

Most of the importers who hope to sell their cars in volume are sending out factory trained service people to train others in the dealerships. Hambro has just started this practice for all British Motor Corp. cars. VW has mobile repair shops touring various sections of the country for training purposes. Also, the company has these mobile units available by sale to dealers.

The foreign makers also pay much more attention to owners' handbooks than U. S. factories. Some importers even maintain a technical information department for owners' problems.

He: Will you sail with me on the sea of matrimony?

She: Yes, after you've made a raft of money.

Service engines by sight — not by ear with these **Snap-on** tuning gauges

"Going by ear" is a money-losing way to service engines — especially if tune-up mechanics hit a "sour note." That's why every top-notch mechanic should be using these *Snap-on* tune-up gauges.

Here's equipment to help mechanics do an expert job. Troubles can be found and adjusted quickly and easily. Vehicles are kept operating efficiently with more power and economy to give greater owner satisfaction.



**MT-307-B
COMPRESSION
GAUGE SET**

Compression testing is a cinch with this easy-to-use set. The 16-in. flexible hose gives you access to almost every type of spark plug installation. A complete set of five adaptors covers most engines.

Adaptor screws in spark plug hole with same socket that unscrews plugs. Hose coupler quickly clips on and you're ready to test. Gauge holds reading until coupling is released. Calibration is in 5-lb divisions to 250 PSI.



**MT-311
VACUUM
GAUGE SET**

This vacuum gauge will accurately detect a wide range of engine troubles from leaky manifolds to weak valve springs. Adaptors in the kit fit carburetor or fuel pump connections of almost all cars — including late models.

The 3-color, 3½-in. dial shows trouble spots at a glance. Normal motor and fuel pump divisions are outlined in green. Faulty motor divisions are outlined in red, subdivided into "leaky manifold, heat riser, late ignition or carburetor adjustment." Adjustable screw reduces vibrations to insure more exact readings.

Ask your *Snap-on* man to demonstrate these tune-up gauges next time he's in your shop. And remember — *Snap-on* tools and shop equipment are available on easy time payments that let you earn with the tools as you pay for them.

*Snap-on is the trademark of Snap-on Tools Corporation.

SNAP-ON TOOLS CORPORATION

8036-F 28th Avenue

Kenosha, Wisconsin





EVERY TIME people in your community see the Yellow Pages emblem, more of them become buying prospects who reach for the Yellow Pages to find where to buy. That makes your own Yellow Pages advertising more and more profitable.

THE YELLOW PAGES EMBLEM is advertised throughout the year. Special advertisements feature it in *Better Homes & Gardens*, *Life* and *The Saturday Evening Post* in June and July, and again in the fall. Hundreds of leading firms display it in their newspaper, magazine and television advertising.

PROFIT from this year-round tie-in promotion campaign by displaying the Yellow Pages emblem in your advertising, on your store front and trucks. Call the Yellow Pages representative at your telephone business office for information.

Power Mower . . .

Continued from page 41

If no fuel flows from the fitting it should be removed from the back and dipped in alcohol, benzol or acetone to remove gum or dirt from the screen and valve.

Checking Carburetor

If fuel flows from the fuel line and not through the carburetor, the carburetor must be taken completely apart and cleaned thoroughly.

Compression Checks

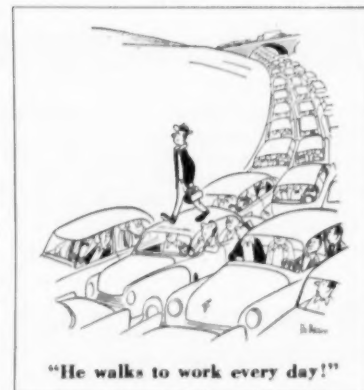
Slowly turn the flywheel against compression. If com-

Take time to pray—it helps to bring God near and washes the dust of earth from our eyes.

pression is good flywheel will turn hard and snap over after point of highest compression is reached. If compression is low the flywheel will turn over with very little perceptible snap.

Engine Skips and Misses

Check carburetor mixture setting. If carburetor mixture is too rich, engine will slow down and knock. If mixture is too lean, engine will knock. Check spark plug wire. Wipe the spark plug wires clean and inspect for broken or worn wires.



2 Hands Replace 10!

... OSCAR TO THE RESCUE IN A GARAGE MANPOWER PROBLEM!

I am **OSCAR** the **AUSCO** man!

Meanwhile — BACK IN THE SHOP...

WHAT A JOB!
FIVE MEN TO TAKE OUT **ONE** AUTOMATIC TRANSMISSION!

I am **JOE SERVICE**!

DOGGONE THESE TRANSMISSION JOBS, THEY'RE MORE TROUBLE THAN THEY'RE WORTH!

HAVING TROUBLE **JOE**?

HERE'S THE ANSWER TO YOUR PROBLEM...
THE **AUSCO** HYDRAULIC TRANSMISSION HANDLER!

SEE—CAME OUT REAL QUICK—WITH ONLY **ONE** MAN NEEDED!

OKAY, YOU **FOUR** MEN CAN GO ON WITH THE OTHER WORK—FROM NOW ON, IT WILL ONLY TAKE **ONE** OF US TO HANDLE AUTOMATIC TRANSMISSIONS!

LET ME HELP WITH YOUR LIFT PROBLEMS, TOO!

AUSCO Jacks

AUTO SPECIALTIES MFG. CO., INC., St. Joseph, Michigan
Other Plants in Benton Harbor and Hartford, Mich. and Windsor, Ont., Can.

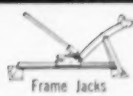
AUSCO... Manufacturers of Quality Jacks for every service need!



Bipod Bumper Jacks



"Y Bar" Ratchet Jacks



Frame Jacks



Curb Jacks



Hydraulic Service Jacks



One-End Lifts Hydraulic and Mechanical



Garage Horses

Glass Replacement . . . Continued from Page 49

be installed in the door.

Tilt the glass inward at the top of the door and work the lower corners into the door one at a time. Lower the window and replace the lower sash channel screws.

Install the ventilator assembly by tilting it at the top of the

door and sliding it down and into position. Replace the ventilator division channel stud and nut and the ventilator attaching screws.

Check for Free Travel

Check the door main glass for free travel in the glass channels.

The ventilator division channel can be adjusted by turning the adjusting stud in or out or position the lower end of the channel fore or aft as required [See Fig. 3] To correct a condition where the glass is "cocked" in the channels, loosen the inner panel cam rear attaching screw and adjust the cam up or down to correct the alignment, then tighten the screw [See Fig. 3].

Now replace the ventilator regulator, using care not to strip the threads on the ventilator shaft to regulator screw. The operating effort required to open or close the ventilator can be increased or decreased by adjusting the friction clamp screw. This small screw is located on the ventilator regulator.

With the necessary adjustments made, lubricate all the moving parts, then replace the access hole covers, waterproof paper, trim panel, arm rest, inside handles and garnish mouldings. Check the motion of the door glass and ventilator assembly once more, and if everything is satisfactory the operation is completed.



**MODEL 4200
BRAKE BLEEDER**
ONE MAN OPERATION. May be used anywhere—inside or outside. Small—handy—easy to store—easy to clean—simple in use and construction. Makes brake bleeding a profitable operation.

**MODEL 3500
BRAKE DRUM
MICROMETER**
Range 8" to 18 1/2" diameter. Mikes all drums on or off Drum Lathe. Accurate and sturdy. Plastic covered direct-reading Dial.

**MODEL 1000
BRAKE CYLINDER
HONE KIT**
Range 1/4" to 2 1/2". Corrects corrosion, pitting or roughness on all types of hydraulic brake cylinders including single and double bore types. Cylinders may be honed on or off car. Driven by any 1/4" electric drill.

**MODEL 1650
BRAKE CYLINDER
SURFACING HONE**
Surfaces all car wheel and master cylinders including Chrysler Blind End cylinders. Flexible drive permits honing cylinders on or off car. Only one adjustment. Slide Lock Ring into position and you are ready to hone.

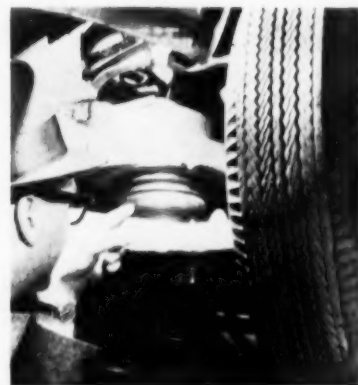
**MODEL 1750
BRAKE SHOE
SETTING GAGE**
Checks drum size and accurately sets shoes accordingly. Use on Ford and Chrysler products with Lockheed type brakes. Cures brake squeal and pulling problems.

for fast, profitable
brake service...

AMMCO
Brake Service Tools
and Equipment

AMMCO TOOLS, INC. 2102 Commonwealth Ave., North Chicago, Ill.

Education gives a man
the polish he needs to with-
stand the hard rubs of life.



New Airide springs by Firestone were installed on the automobile shown here for one of the final tests before production begins at Firestone's new plant in Noblesville, Ind. Airide springs work on a compressed air principle.

Important Bear Facts like this put Autorol in a class by itself for low-cost, precision roll testing...

Only Bear Autorol has **DOUBLE-ROLL ACTION**

for Extra-Precision, Extra-Profit,
in-shop Road Testing



FREE-RUNNING ROLLS enable you to pin point trouble quicker.
LESS VIBRATION SHIFT from one side to another.
LESS NOISE TRANSFER for easier location of "trouble sounds."
8 BEARING SUPPORTS instead of 4 means greater precision.
LARGER DIAMETER ROLLS run smoother, even at top speeds.
ROLLING-RESISTANCE WEDGING ACTION simulates road load.

Your choice of recessed, rack, or floor-type models

Less investment... no additional equipment to buy!
No expensive installation... no costly pit construction necessary!
No air, power or water lines to run! Get in on the ground floor of this new test service. Get started RIGHT! Get equipment with free-running rolls like those the car factories use! Autorol proves again—when you get ALL THE BEAR FACTS, you'll buy Bear Equipment! BEAR MFG. CO., DEPT. M-1, ROCK ISLAND, ILLINOIS.

GET ALL THE **BEAR FACTS** AND YOU'LL BUY

BEAR *Autorol*
THE ORIGINAL ROLL TESTER

BUILD GOOD WILL and EXTRA PROFITS with AUTOROL:

- Road test new cars before delivery
- Check shift patterns and other automatic transmission troubles
- Find high-speed oil leaks faster, easier
- Diagnose hard-to-find ignition troubles
- Discover loose flywheels, bad timing chains or gears and many, many more!



R-2647 R

Pop O'Neill Continued from page 52

to the little girl's arms. A cheer went up from the youngsters.

"Thank you, mister. Thank you so much. Cynthia was having her picture taken with my new camera," added the little girl. "And Freddie's dog chased her up the tree."

"Well, just keep Freddie's dog

out of the photo act in the future" counseled Larry with a smile as he climbed back into the wrecker. . . .

Pop O'Neill, gesturing with the morning newspaper, was talking to Tommy when Larry got back to the shop. Pop motioned him to join them and

called: "Did you get Bill Streik going again?"

"Yeah, Pop. Burned points in the distributor was all it was. But what's going on here? The way you waved that newspaper when I came in kinda' made me think you were the starter over at the Speedway."

"Starter . . ." sputtered Pop, trying to hide a grin. "I'd sure like to start a fire under a certain reporter." Pop gave the paper another vigorous flourish.

"This *Clarion* reporter," Pop went on, "wrote up an article lambasting the poor public relations of a garageman over in the City. I bet the reporter was trying to beat down the fair price and the shop owner got tired and blew his cork a bit, that's all."

"Sure, Pop, sure," soothed Tommy. "But why get het up about it. People in our town won't apply it to us."

"Don't be too sure that some won't," rejoined Pop. "In our industry, things like this do nobody any good. Just remember that praise for one is often praise for all . . . and vice versa."

The telephone's jangle cut off further comment. "I'll get it," said Pop. "Meanwhile, Larry, would you mind giving Tommy a hand on that Hydramatic?"

Tommy led the way over to a parked '54 Oldsmobile sedan. He explained: "Burt Mosse dropped it off while you were out. Burt's having automatic transmission trouble. It shifts too quickly through the gears. The engine, according to him, never gets to rev up enough when shifting. Also the kickdown isn't working right. Burt had it checked over briefly on his vacation trip upstate and they told him it looked like a major overhaul."

"O.K." was Larry's comment. "Let's take it for a ride." True to Mosse's complaint the car was sluggish. Its get-away was about as slow as a boy taking leave of his best girl on Saturday night.

(Continued on page 94)



QUICK

WITHOUT the remedy readily at hand, the failure of a hydraulic hose line immediately sets up a costly chain reaction. With varying degrees, this is true not only in construction but in all operations utilizing the many recognized advantages of hydraulic power.

Fortunately, today's engineering advancements have reduced the time loss resulting from such emergencies to a matter of minutes. For example, with Weatherhead quick detachable, reusable and clamp-type hose ends, dependable on-the-job repairs can be made promptly. To further facilitate quick action, Weatherhead coast-to-coast distributors maintain adequate stocks of Weatherhead hose and hose ends to assure you of nearby, dependable service.



WEATHERHEAD

FIRST IN HYDRAULIC CONNECTIONS

Brass and Steel Tube Fittings
Hose, Ends and Hose Assemblies

THE WEATHERHEAD CO., PORT WATNE DIVISION
Dept. M-4, 128 West Washington Blvd., Port Wayne, Indiana
In Canada: The Weatherhead Co., Ltd., St. Thomas, Ontario

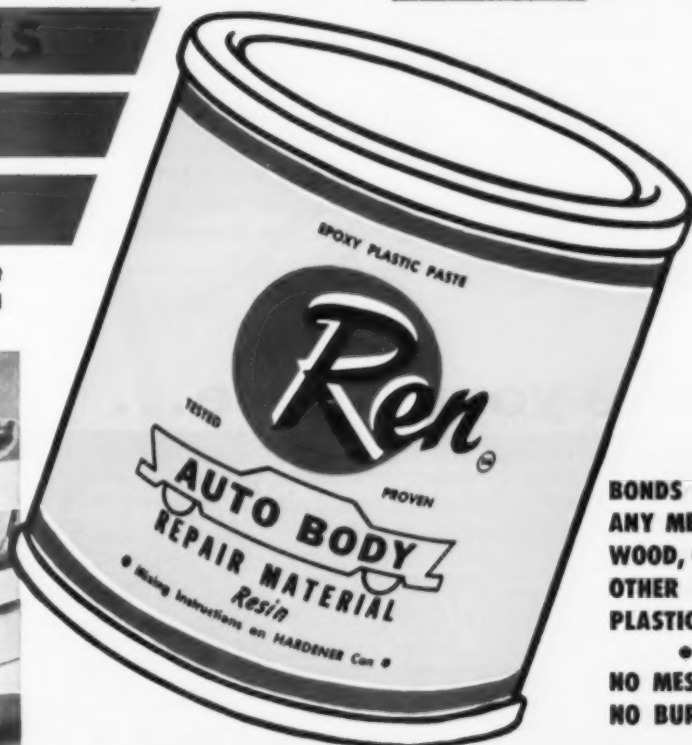
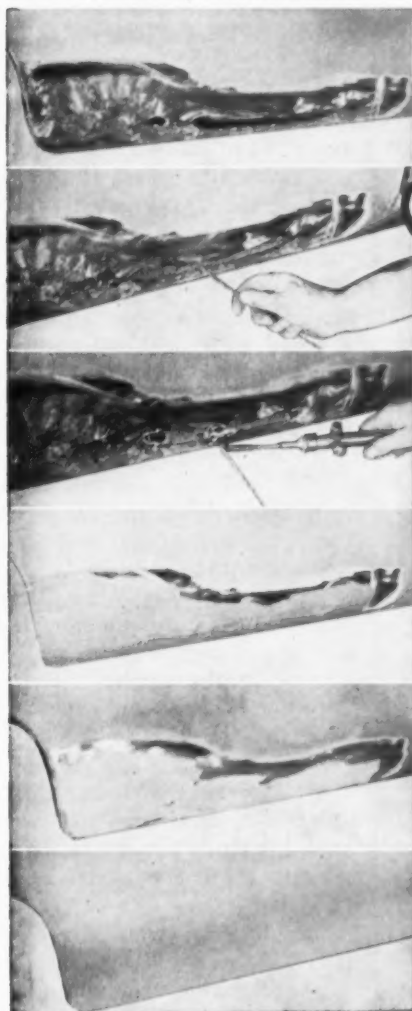
Do it Successfully - Easily

REINFORCES

REBUILDS

REPAIRS

Rips or Tears in fenders, Body Rot and Dents are all easily repaired successfully with new Ren.



**BONDS TO
ANY METAL,
WOOD, GLASS,
OTHER
PLASTICS**

**NO MESS
NO BURNS**

The Dependable Auto Body Repair Material **SENSATIONAL EPOXY PLASTIC PASTE**

Ren—The New Standard for The Trade—an epoxy plastic paste that does all repair work better and at a lower cost. Ren epoxy is preferred because it is easier to handle—controlled hardening from 2 to 4 hours at 75° to 1 to 5 minutes with heat. Applied like putty—Hardens like metal.

Ren Holds Its Bond . . . feathers out mirror smooth, can be filed, sawed, or drilled without pulling from repair. Ren will not shrink, crack, rust, rot or mildew and is not affected by heat or cold.

Bigger Profits—More Production Per Hour

SEE YOUR JOBBER TODAY

**PLASTICS FOR AUTOMOTIVE
INDUSTRY SINCE 1938**



PLASTICS, INC., LANSING 9, MICHIGAN



Pop O'Neill Continued from page 92

Back at the shop, Tommy and Larry checked over the linkage of the transmission. They checked the fluid level and the adjustment of the bands. Larry then suggested they check the motor mounts.

"Sometimes they come loose and the engine slides, throwing

out the linkage," he explained.

The second road test showed no improvement, however.

"Maybe it's in the control valve body," ventured Tommy.

"Or the clutches are shot," added Larry, sighing for the second time that day. "In either case, the transmission is gonna

have to come out."

They outlined the situation to Pop as the car went on the lift again. "There's still one more check," said Pop. "Let's try it."

Skeptically, Larry and Tommy watched Pop disconnect the rod at the transmission throttle lever and pulled it forward to see if the kickdown piston moved. It didn't. Pop moved the lever a full revolution yet nothing else seemed to move in the control valve body.

"All right," Pop said. "After you take off the side cover and the control valve body, give me a call."

About an hour later when the section in question was removed, Pop checked it over. Larry himself pointed to where the inner part of the transmission throttle lever was loose on the splines.

"Doggone, Pop. I have to hand it to you. When you turned that lever from the outside and found it could go a full turn without moving the kickdown piston, you knew it had probably slipped on the inside."

A new throttle lever was inserted and the control valve body replaced on the car. The Olds passed the road test that followed with flying colors.

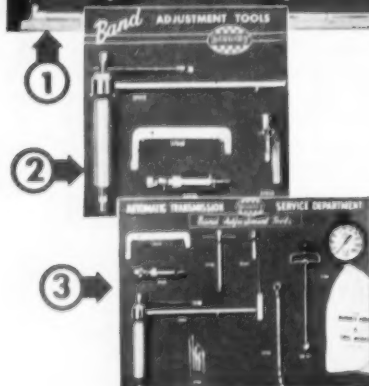
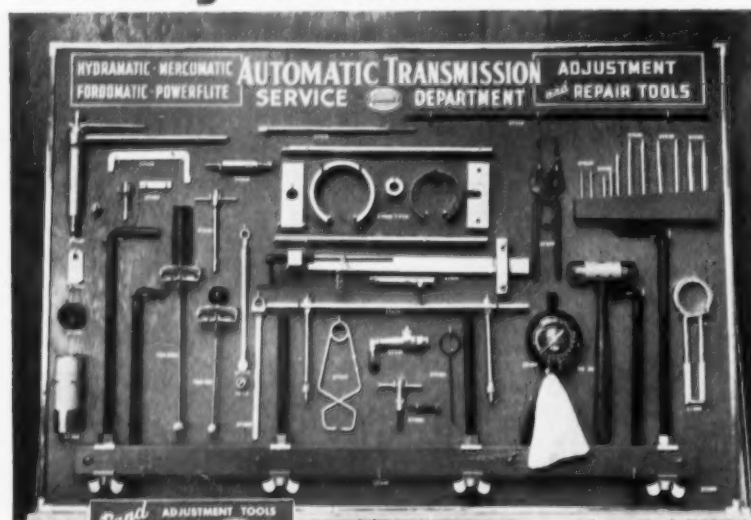
Later that day when Burt Mosse stopped to see how his car was faring, Pop was elsewhere for the moment. Larry gave him the keys and explained what the difficulty had been.

"Sure want to thank you boys and Pop," said the pleased Burt. "I was expecting a major overhaul. Like to do something sometime to show how much I appreciated it."

"Maybe you can," joked Larry. "You work over at the *Clarion*, don't you? Calm down that reporter who's all fired up about a certain garage over in the City. Pop's blood pressure can't take the pace."

"Yes . . . I remember the story you're talking about. If I get a good chance, I will. Don't see
(Continued on page 98)

Take your choice...



... And service automatic transmissions faster... easier... more profitably

Whether you specialize in complete transmission service or only make band adjustments, Bonney has the right tool assortment for you... for a small investment. No unnecessary extras to buy. See your Bonney jobber and choose the Bonney automatic transmission tool assortment that's right for you.

- 1. DB-27480
- 2. DB-27495
- 3. DB-27490



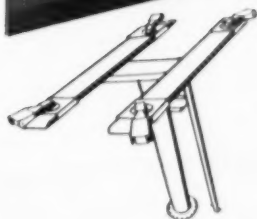
BONNEY FORCE & TOOL WORKS • ALLIANCE, OHIO

SELECT THE MOST PROFITABLE HOIST FOR YOU

...from the complete **GLOBE** line

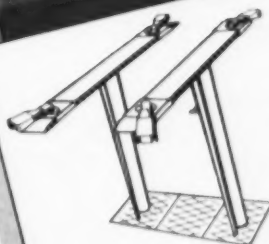
Frame-Kontakt SINGLE POST F-10

8,000 lbs. lifting capacity.
Accommodates all cars.
Easy spotting... fast lifting.
Ideal for full cycle of service
and repair work. Available
either semi- or full-hydraulic.
Furnished with set of
4 Continental Adapters.



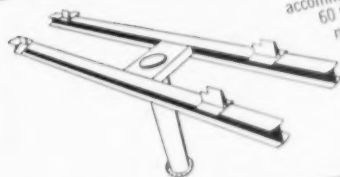
Frame-Kontakt TWO POST F-27

8,000 lbs. lifting capacity.
Accommodates all car
wheelbases. Wide open
accessibility to all underside
parts. Low cost installation.
Furnished with set of
4 Continental Adapters.



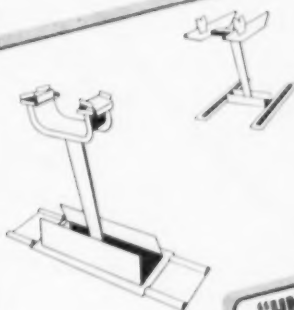
FREE WHEEL SINGLE POST FW-10

A Globe leader for more than
20 years. 8,000 lbs. lifting
capacity. Wheelbase
accommodations range from
60 to 160". Recessed or
non-recessed... avail-
able both semi- and
full-hydraulic.



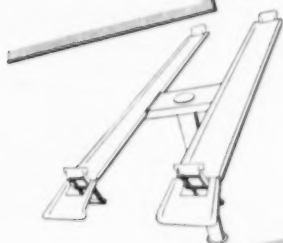
AUTO AND LIGHT TRUCK TWO POST SR

A floor-recessed
hoist with 8,000 to
14,000 lbs. lifting
capacity... 3
types manufactured
for wheelbases
up to 182".



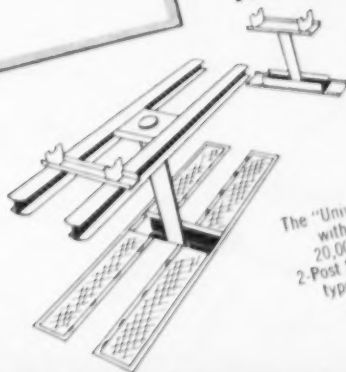
ROLL-ON SINGLE POST RO-10

Permits quick
servicing... no
wheel spotting or
jack adjustment.
Unrecessed...
8,000 lbs. lifting
capacity...
wheelbases to 160"
accommodated.
2 types.



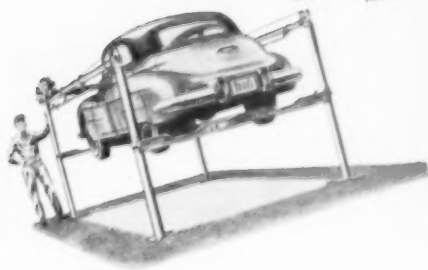
"UNIVERSAL" TRUCK TWO POST SLR

The "Universal" Truck Hoist
with lifting capacities of
20,000 lbs. to 40,000 lbs.
2-Post Saddle and Long Rail
type. Low initial cost...
economical operation.



ELECTRIC 4-POST

For upper floor installations, for
temporary locations, or where
excavation is impossible. Both free-
wheel and roll-on types
available. Capacity 7500
lbs. 5 models.



GLOBE

THE BEST LIFT

1ST

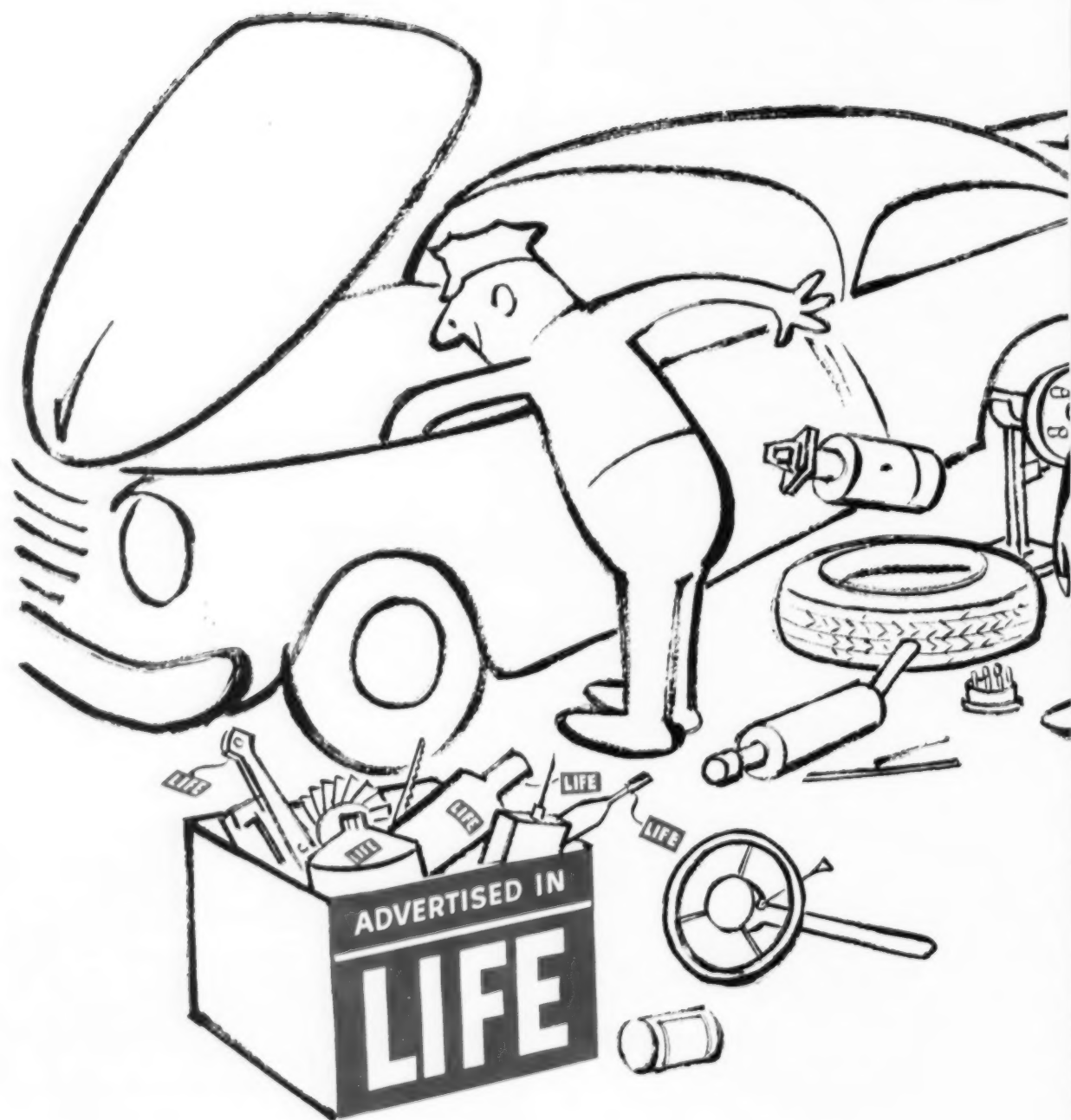
in Automotive HOISTS

East Mermaid Lane at Queen Street, Philadelphia 18, Penna.

PLANTS: OEE MOINES-PHILADELPHIA-LONG BEACH, CAL.

ADVERTISED IN
LIFE

soups up



accessory sales

The "Advertised-in-LIFE" symbol builds extra power into your selling system . . . because LIFE reaches—and pre-sells—your customers.

In an average community—your community—LIFE reaches 3 out of 5 households in 13 weeks. And LIFE wins an enthusiastic response . . . to great stories and pictures, and to advertising for famous-name automotive accessories.

Do what more and more auto dealers, service stations, parts outlets and garage operators are doing: feature LIFE-advertised brands and emphasize them with the "Advertised-in-LIFE" selling symbol.



LIFE pre-sells

more automobile owners. An average issue is read by 30.4% of all car owning households.

more people everywhere. Weekly circulation: LIFE 5,738,226; Saturday Evening Post 4,950,061; Look (bi-weekly) 4,191,057

Sources: July-December 1956 "As filed with the Audit Bureau of Circulations, subject to audit." A Study of the Household Accumulative Audience of LIFE.

Motoring America *responds* to **LIFE**

too much of the reporters, though, as I work in the Advertising department. . . . But you never can tell."

The next day was Saturday and Pop's equilibrium seemed completely restored. By Sunday morning Pop was well in the swing of making it truly a "Day

of Rest." Pop had gone to church, had eaten a hearty breakfast and was ensconced in his easy chair ready to tackle the chore of reading the Sunday papers from stem to stern.

First Pop checked the sports page. He grunted over to Mrs. O'Neill when he saw that his fa-

vorite baseball club had dropped yesterday's twin bill. Suddenly he let out a whoop of surprise and exultation.

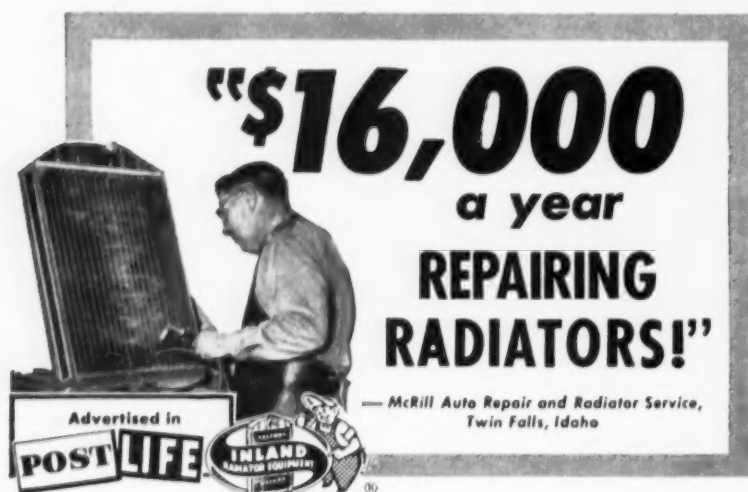
"Read this, Mother!" cried Pop, pushing the Sunday feature section under his wife's nose.

"Small Town Garage Is Giant in Public Relations . . ." began Mrs. O'Neill. "Why, Pop! This picture shows Larry . . . and there's your wrecker. I can see the lettering on the cab as plain as day!"

It was true. The two-column photograph showed Larry on top of Pop O'Neill's wrecker. Larry was just lifting down a kitten from a tree limb. The story that followed (written under the by-line of that "same reporter") was lavish in praise.

It praised the garagemen in particular and the garagemen in general. It spoke movingly of the "interruption of a busy schedule to still the tears of a heart-broken youngster." It spoke of a *Clarion* employee who only two days ago was "spared the expense of a major repair job due to the skill of the owner and employees of this same service center, typical of the American automotive service specialist."

And in summing up the whole glowing account, the article spoke warmly of the parent who sent in the photo. "A parent who realized that her child's camera had captured an act of chivalry uncommon in the age of motor-



**"\$16,000
a year
REPAIRING
RADIATORS!"**

— McRill Auto Repair and Radiator Service,
Twin Falls, Idaho

Advertised in
POST LIFE

**INLAND
RADIATOR EQUIPMENT**

McRill says: "My Inland-equipped radiator dept. gave me an additional \$12,416 in 1955—over \$16,000 in 1956! My total repair volume is up 41%, due largely to added business attracted by my radiator dept. To Inland equipment and training goes much of the credit!"

YOU CAN DO AS WELL! Many others, with modern Inland equipment, are making \$8,000, \$10,000, \$15,000 a year! Car owners are now aware it pays to have their radiators cleaned and repaired regularly.

INLAND NATIONAL ADVERTISING HELPS YOU! Inland ads in the Post and Life warn car owners of the danger of neglecting radiators . . . urge regular servicing . . . suggest seeking the nearest shop displaying the Inland sign. Inland, world's largest radiator servicing equipment manufacturer, offers the complete package—equipment, training, merchandising, even a "Pays-For-Itself" purchase plan. Mail the coupon for free descriptive book.

FREE TRAINING SCHOOL Complete factory school trains you or your man quickly. Cleaning, repairing, recoring, pricing, merchandising—everything! Hundreds of graduates now expert radiator repairmen. It's FREE to Inland customers! "Qualified me to give expert service!" says Jim Pendergast, Faber, Mo. "Excellent training!" says Moser Motor Sales, Berne, Ind.

MAIL TODAY

New free 48-page book, "Blueprint for Profits," tells about many making an EXTRA \$8,000 to \$15,000 a year servicing radiators. Complete with illustrations, descriptions and prices of required equipment. Popular "Pays-For-Itself" purchase plan. Invest a minute to mail the coupon—the rewards can be amazing! Send today!

INLAND MFG. CO., 1108 Jackson St.,

Dept. MA-6, Omaha 2, Nebr.

"SOLD EXCLUSIVELY BY MAIL"

INLAND MFG. CO., Dept. MA-6, 1108 Jackson St., Omaha 2, Nebr.
Please send now free book, "Blueprint for Profits."

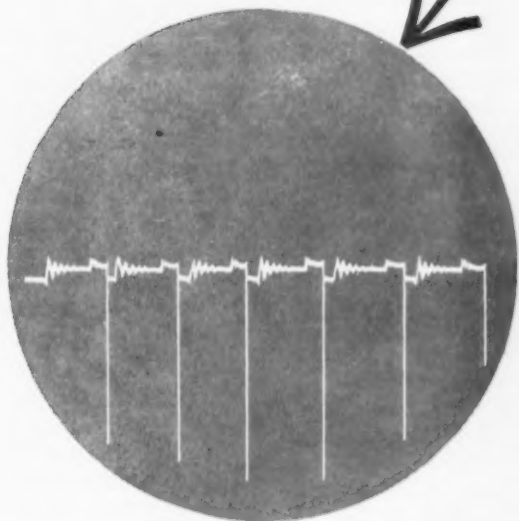
FIRM _____ (PLEASE PRINT)
ADDRESS _____
CITY _____ ZONE _____ STATE _____
BY _____ TITLE _____
If dealer, make of car sold _____
Are you now operating a radiator dept.? ☐ Yes ☐ No



this is an
OLD, OLD STORY

Hard to read, incomplete information . . .

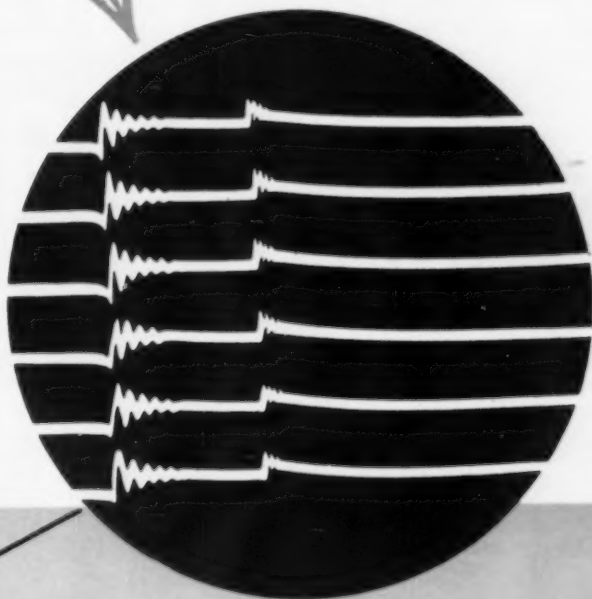
We gave up this type
pattern in 1941.



this is
MODERN

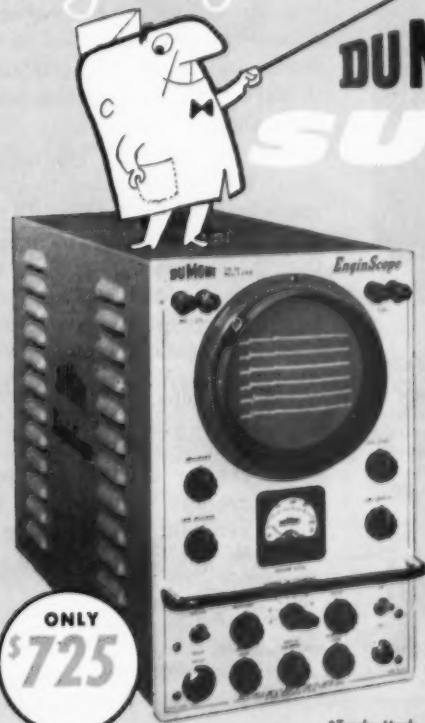
SUPERSCAN

Each cylinder shown
individually, simultaneously.
Easy to read! Accurate! Complete!



Only the fabulous

DUMONT EnginScope* has
SUPERSCAN



You don't have to be an engineer to read the test pattern on a Du Mont EnginScope . . . it's easy, fast and accurate! The obsolete method of showing all cylinders in a single line across the screen is a very old story. Du Mont had it in 1941, but gave it up as hopelessly inadequate.

Before you buy any scope — insist on a demonstration, and if you can make it a side-by-side comparison, better yet! The Du Mont EnginScope gives you so much more, you'll never be happy with any imitation . . .

ALLEN B. DUMONT LABORATORIES, INC.

Send name
and address
for demonstration,
or complete
details . . .

AUTOMOTIVE PRODUCTS DEPARTMENT
Allen B. Du Mont Laboratories, Inc., Clifton, N. J.

() Arrange a demonstration in my shop. Dept. MA-6
() Send complete information.

NAME
COMPANY
ADDRESS

4-D Styling Continued from page 61

wider, bolder look all around.

Program's Master Key

One of the master keys to the program is a 4-D styling and refinishing manual, designed to help the painter or shop manager sell painting and restyling. Special attention is given to ways of making a car look long-

er, lower, wider and bolder, along with a section on business-getting ideas and shop tips.

The manual explains that new cars look longer than they really are because the color sweep of the side panels carries from front to rear; that even though the actual height has been lowered, this illusion is increased by

slanting hoods and flatter roofs; and that the rear fender "fin" concept gives them a wider, bolder appearance. In each of these areas the shop man has an opportunity to transfer modern styling to older model cars by using color selection and color separation techniques.

As a companion piece to the styling manual, the kit includes a 4-D sketch pad and estimate form combined. The estimator simply roughs out suggested styling ideas for a given car, jots down the estimate on the same sheet, and gives it to the potential customer—so he can see at a glance what a refinish and color styling job will do for his car, and how much it will cost.

In a dealership, the sketch pad is intended for use of the service or floor manager, who usually doesn't have time to check cars for dents and nicks until after the morning rush of mechanical entries. Then he can note which cars have dents and where, mark them on the sketchpad and leave the notations in the car with an estimate. It is suggested that if possible the owner be contacted during the day, reminded of the dents, and asked for permission to have them fixed in the firm's body shop.

A "certificate of craftsmanship" will be presented to shops participating in the 1957 DOOF program. This tells the customer that the shop is a member of the Autobody Refinishing Guild, and has been recognized for quality refinishing and color styling.

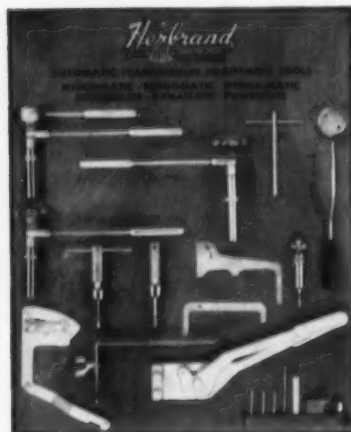
Other DOOF kit materials—all of them coordinated by design and theme—include:

Mailers for the shop to send to car owners, highlighting the DOOF campaign and pointing up their own quality refinishing service. . .

Free DOOF kits, says Marsden, are available. For further information, contact the 3M company, Dept. F7-101, 900 Bush Street, St. Paul 6, Minn.



NEW EFFICIENCY IN AUTOMATIC TRANSMISSION SERVICE



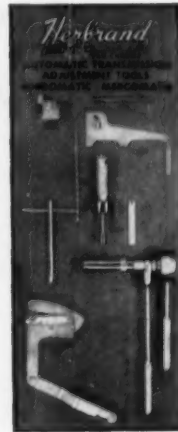
BOARD NO. DB-21

Serves Mercomatic—Fordomatic—Hydra-Matic—Powerglide—Dynaflow—Powerflite.



BOARD NO. TBG-2

Serves Hydra-Matic—Dynaflow—Powerglide.



BOARD NO. TBF-1

Serves Fordomatic—Mercomatic.

a choice of three Job Matched service boards

This choice of three external transmission service sets covers the field for the man concerned with auto service and repair. One set handles all automatic transmissions—while the other two are for specialized shops. But

whichever set fits the need, each is "job-matched"—every tool has a use. Yet no other tools are needed to equip any shop for complete external transmission service jobs. All three sets are money-makers—time-savers! Ask your jobber.

NEW TOOL-OF-THE-MONTH
CENTER PLANE BRAKE TOOL NO. 260
 • EASES REMOVAL/REASSEMBLY OF SPRING ON NEW CHRYSLER CENTER PLANE BRAKE.

One twist and the spring is free. To replace spring use tapered end of tool and slip spring into retaining slot. Cannot damage brake lining. Made of special alloy steel. Designed especially for Plymouth, DeSoto, Dodge and Chrysler.

No. 260

Herbrand Tools
 Mechanics H o \$1.75

Herbrand Tools
 HERBRAND DIVISION THE BINGHAM-HERBRAND CORP.
 FREMONT, OHIO

Ditzler Announces...

SAN QUIC NEUTRAL

DZL-3600

Gray Primer Surfacers

IT'S NEW!

- Easy Sanding
- Non-Settling
- Extra Filling
- New Color
- Fast Drying

Ditzler announces new SAN QUIC Neutral—DZL-3600—a new neutral gray lacquer primer surfacer that dries with unusual speed. Sands so easily that #400 paper can be used without clogging.

• **New SAN QUIC** has exceptionally high solid content. Fewer coats are needed for proper filling. It feathers out with no splitting or chipping around edges. SAN QUIC also has exceptional adhesion and color holdout, improving the appearance of final coats.

• **This outstanding** primer surfacer is now available in convenient, easy-to-pour cans. It is non-settling, eliminating waste, time and laborious stirring. DZL-3600 doesn't settle hard in the can or gun cup.

• **Try SAN QUIC** Neutral Gray DZL-3600—you'll find it saves labor and materials and assures customers better-looking paint jobs.

DITZLER COLOR DIVISION

Pittsburgh Plate Glass Company, Detroit 4, Michigan

DITZLER®

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FINER GLASS



PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED





YOU'RE FIRST . . .

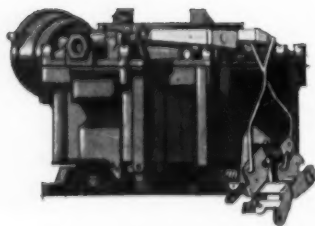
in line when it comes to quality. Rochesters are dependable . . . each one is *individually* tested. Economically inclined, they give *just* the right mixture, at just the right time, for top performance and gas mileage.

RECOMMEND AND



YOU'RE AHEAD . . .

with America's most called-for carburetor. Rochesters are standard on almost half the cars currently produced . . . right for replacement on over 22,000,000 cars on the road. A mighty big market!



**Standard on Chevrolet, Pontiac,
Oldsmobile, Buick and Cadillac**

YOU'RE UP...

on all the latest service tips. Rochester's *free* training helps you become a carburetor specialist... makes your time worth more money! Yearly "model-change" course keeps you up on new developments.



REPLACE WITH ROCHESTER!

YOU'RE IN...

with the handiest parts kits made. Tired of breaking up kits for a few parts? Rochester parts kits are a mechanic's dream... just the parts and gaskets (including flange gaskets) you need for any job.



R ROCHESTER CARBURETORS

ROCHESTER PRODUCTS DIVISION OF GENERAL MOTORS, ROCHESTER, N. Y.

to bring home.

Rather, the question is whether the market, hungry as it is, will be able and willing to absorb the mountains of merchandise flowing day and night from the assembly lines of industry.

For another thing, the mental

attitude of the customer is undergoing a change. The customer is more mature, has been around more, is more selective.

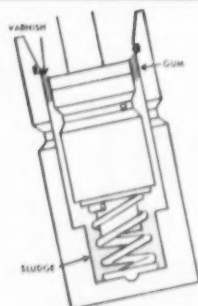
For a third thing, prosperity has produced new habits in groups that never before had been permitted to taste of the fruits of the more abundant life.

They tasted, they liked it, and they came back for more!

For a fourth thing, automation, social security, and a new look at life are setting up new markets. Teenagers are a new world product. The world is going through a youth infatuated society stage, with its hound dog and rock-and-roll emotionalism.

No man goes before his time—unless the boss had left early.

NEW HYDRAULIC LIFTER SERVICE



LOCATE and CORRECT NOISY LIFTERS IN THE ENGINE!

HERE IS PROOF THAT THE VALVE-GAPPER IS THE FASTEST AND MOST PROFITABLE METHOD OF CURING 90% OF HYDRAULIC LIFTER TROUBLES (stickiness caused by build-up of gum, sludge and varnish)

PROCEDURE — WITH ENGINE IDLING:

- 1 Check all lifters with the Valve-Gapper. (Barrel pin in lower hole.) When dial hand oscillates (proof lifter is sticking or malfunctioning) mark rocker arm.
- 2 Place Valve-Gapper on marked rocker arm with barrel pin in upper hole. The Valve-Gapper will now completely collapse lifter, exposing varnished areas.
- 3 Then pour a concentrated tune-up oil down push rod and it will flood exposed areas in collapsed lifter. Use concentrates rather than additives.
- 4 Leave Valve-Gapper in position three or four minutes—time enough for tune-up oil to dissolve gum, sludge and varnish. Proceed to next lifter.

It's only sensible to treat all lifters. Those checking out ok (hand remains at zero) may have a varnish build-up already started.

IN 9 TIMES OUT OF 10, ALL LIFTERS WILL NOW FUNCTION PERFECTLY—and the Valve-Gapper will prove it! Just re-check as in Number (1)

A PROFIT OF \$15 OR MORE PER HOUR!

Treatment \$15.00

Tune-up oil, oil change, filter . . . \$ 6.00

\$21.00

Labor and materials \$ 6.00

PROFIT \$15.00

Even \$7.50 per treatment makes a big profit! And no time wasted looking for noisy lifters.

THIS NEW SERVICE AND PROFIT IS IMPOSSIBLE WITHOUT THE VALVE-GAPPER!

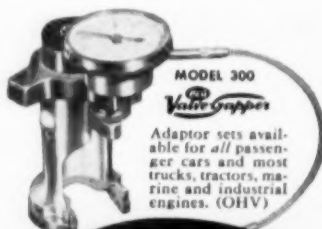


Lifter trouble may be a worn plunger, body, faulty check valve or spring. Then, no amount of tune-up oil will help. You must determine if lifter is functioning properly after treatment. Possible only with the Valve-Gapper!



"SEE" the condition of lifters with the Valve-Gapper.

- Dial hand remains at zero when lifters are functioning properly.
- Dial hand oscillates .005" to .030" or more when lifters are sticking or malfunctioning.



MODEL 300

Valve-Gapper

Adaptor sets available for all passenger cars and most trucks, tractors, marine and industrial engines. (OHV)

P & G Manufacturing Co.
305 N. E. Russell Street
Portland 12, Oregon
U. S. A.

ON MECHANICAL LIFTERS, USE THE VALVE-GAPPER FOR MICROMETER-ACCURATE CLEARANCE ADJUSTMENT

The downtown benches are being occupied by post 65-year-oldsters. Suburbia is springing up and along with it new trading centers, do-it-yourself merchandising, two car families.

The new world is in the mood for love, laughter, lyrics.

Entertainment has become big business! The new sales people smile at you from TV screens and singing commercials tenderize your sales resistance. Business-building ideas constitute one ingredient in hard, intelligent selling that is needed today.

You can't quarantine ideas, ideas shape the destiny of the world.

Hard, intelligent selling has a place for constructive ideas. Selling has an opportunity and challenge for today.

Sales Wisdom will find a way to meet that challenge!



ECHLIN EXTRAS IN *Molded* PARTS

In the Quality Spotlight

The sleek beauty of ECHLIN Molded Parts is much more than skin deep. For, the beautiful, high-lustre finish of these famous Electrical Parts adds greatly to their dielectric strength which resists electrical breakdowns. This assures you of longer, trouble-free service. On every tune-up and engine repair job, inspect the molded parts for burned segments, carbon tracks and corroded tower inserts... for the best preventive maintenance always replace with ECHLIN!

ADVERTISED IN
The Saturday Evening
POST

YOU CAN
PAY MORE,
BUT YOU CAN'T
BUY BETTER
MOLDED PARTS!



ECHLIN



Ignition

CONTACTS
COILS • CONDENSERS
& OTHER AUTOMOTIVE
ELECTRICAL PARTS

ECHLIN MANUFACTURING COMPANY • NEW HAVEN 5, CONN. • U.S.A.
ECHLIN IGNITION OF CANADA LTD. • 56 CONNIE ST. • TORONTO 15, CANADA

that your prestige is secure, or you have reached a financial standing that makes you think that you are immune to the occasional loss of a customer.

However, if either reason holds true at your shop, now is the time to stop, take stock. Do a real review job on selling tech-

niques. You never know when a new service station may open up across the street—and deal your own business a heavy body blow. Perhaps because it emphasizes a more aggressive form of customer solicitation.

As far as a new service station is concerned, the survey

showed that owners and managers generally go all out to please the new customer. Neglect only enters in once customers are "sold" on the idea of regularly patronizing the stations.

But no matter how long you have been doing business in your present locality yourself, there are many positive ways in which you can hold on to the customers. Here are a few examples:

One tire specialist does this by painting large "Thank You" signs on the floor of each department stall where the customer can't miss seeing it. Signs above doors and on walls are equally effective.

Another courts the trade of the car owner who takes pride in his car's appearance. This proprietor takes snapshots of cars that he has just washed and waxed. These are kept on file and mailed to the car owner about the time when another wax and wash job is due.

A service station operator who is located a few miles beyond the city limits helps the customer who isn't sure of his directions. He does so by establishing a "Map Directory Wall." This is honey-combed with ordinary window shade rollers, which are neatly labeled when they are rolled up. By pulling them down, the customer can get a full view of any particular locality. The customer can make notes while his car is being serviced. More detailed road maps are pasted on the topside of each shade.

Wiping windshields is a really "dyed in the wool" method. But have you ever thought about using paper towels that bear your name, and presenting motorists with a supply as a good will gesture?

An even simpler way to keep a customer satisfied is so obvious that it is often ignored for just this reason: Ask him or her if they are satisfied. In such a manner as to show you are sincerely interested in top service.

You're seeing more and more of these filters



...they're signs of a smart buyer!

DISCARDIT®
FULL FLOW
MICRON ELEMENTS

Easy on, easy off! No tools, mess or parts to clean! No housings, oil lines or connections! No fuss, no adjustments! Built-in diaphragm scientifically controls oil flow! Pressure by-pass valve insures immediate oil supply. The accordion-pleated filtering material traps asphalt and carbon as fine as 5 millionths of an inch! Amazing Feridium Anode destroys damaging, motor-crippling acids! The LEE "Discardit" works better — costs less — leaves a higher net profit! Make sure you stock them! **STANDARD REPLACEMENT** on 1957 Ford, Mercury, Lincoln, Thunderbird, Continental, Turnpike Cruiser, Studebaker Golden Hawk and Studebaker President.



MICRALYTIC®
CARBURETOR
AIR FILTERS

Only 8 numbers give you complete coverage for every '57 car that has been factory-equipped! Exclusive moisture-resistant "Micralytic" construction insures high dust capacity! High-velocity air passages are constantly maintained at all engine speeds! Bonded gaskets prevent by-passing of dirty air! Order at once!

ADVERTISED IN
LIFE



**FULL FLOW
MICRON ELEMENTS**











Made exactly to replacement specifications. They provide two-way protection with accordion-pleated filtering material that traps asphalt and carbon as fine as 5 millionths of an inch PLUS the amazing Feridium Anode that destroys damaging, motor-crippling acids! No other filter can match LEE in concept, quality or performance! They're better — they cost less — you profit more! Be sure to stock them! **STANDARD REPLACEMENT** for all popular cars, trucks, buses and tractors.


16 FEET OF ACCORDION-PLEATED
FILTERING ELEMENT TRAPS
ASPHALT AND CARBON AS FINE AS
5 MILLIONTHS OF AN INCH!



AMAZING ANTI-ACID FERIDIUM
ANODE COMPLETELY NEUTRALIZES
DESTRUCTIVE ACIDS!

THE ONLY FILTERS WITH THE TANGIBLE ACID DESTROYING FERIDIUM ANODE!
Write for NEW catalog!
LEE FILTER CORP., NORTH ARLINGTON, N. J.

If you want to give your customers top quality
 winter protection install  the
 guaranteed all-winter anti-freeze It gives
 unsurpassed freeze protection.  And  gives
 greater protection against rust and corrosion than
 any other nationally  advertised brand. Tested
 in the  laboratory and on the road!  Place
 your order  now. Your  supplier will
 make delivery when you want it. And you're protected
 against any price decreases! 



Here's the
guarantee you
hand your
customers!

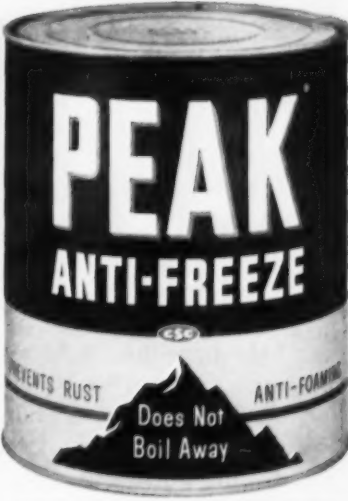
Here is your

PEAK[®] ANTI-FREEZE GUARANTEE


Commercial Solvents Corporation hereby guarantees that PEAK is made from ethylene glycol, the finest base material known for all-winter anti-freeze. When installed in a normal automotive cooling system, according to printed directions, it is further guaranteed that PEAK:

- Provides unsurpassed all-winter freeze protection
- Won't evaporate or boil away under any driving conditions
- Protects all the metals in the cooling system from rust and corrosion for a full winter's driving
- Prevents overflow losses because of a special anti-foam agent
- Won't clog the cooling system
- Won't harm gaskets and rubber hose
- Won't creep, seep, or leak from any cooling system tight enough to hold water
- Won't damage the car finish

COMMERCIAL SOLVENTS CORPORATION, 260 MADISON AVE., NEW YORK 16, N. Y.



Remember to stock top
quality NOR'WAY[®]
Anti-freeze for budget-
minded customers!



Hanks Takes "500" • • Continued from page 37

age speed of 133.640 mph.

Four accidents did occur during the 41st holding of the famed Indianapolis "500" but no one was injured seriously. The yellow caution light glowed for a few seconds less than 32 minutes. Running time for winner Sam Hanks was 3 hours, 41

minutes and 14 seconds. His pit crew did a magnificent job. Three stops required only 120 seconds. His third and final stop took only 34 seconds, still leaving Sam in the lead over the close-charging Rathmann.

The sixth through the tenth finishers were: 6th, Johnny

Boyd, Bowes Seal Fast Spl. (132.841 mph); 7th, Marshall Teague, Sumar Special (132.724 mph); 8th, Pat O'Connor (who had won the Pole Position during the Qualifying Trials), Sumar Special (132.275 mph); 9th, Bob Veith, Bob Estes Special (131.858 mph); 10th, Gene Hartley, Massaglia Hotels Spl. (131.339 mph).

The winning car, George Salih's Belond Exhaust Special, was covered in detail in last month's "Indianapolis Preview" by MOTOR AGE (see page 40). This car represents a change in design thinking. The car is shorter, smaller, lower, and lighter. The engine rests 18 degrees from the horizontal. This gives the hood much less area to cover so it is lower and much shorter than if it had to cover an upright engine.

Dimensions of the Belond Exhaust Special include: length, 13 ft. 1½ in.; top of tail fin to ground height, 35 in.; top of hood to ground at front axle, 21 in.; width, 35 in.; wheelbase, 96 in.; ground clearance, 4 in. plus.

The engine, as already mentioned, rests at 18 degrees from the horizontal. This powerplant is a Meyer & Drake 4 cylinder with modifications for its horizontal installation. It was necessary, for example, to make a new oil sump, mounted in place of the conventional crankcase side plate.

Specifications: 251 cu in. displacement; 4.156 in. bore; 4.625 in. stroke; two gear-driven overhead camshafts which actuate two intake and two exhaust valves for each cylinder. Rated horsepower is 325 at 5500 rpm.

A football coach accompanied a prospective tackle to the dean's office, where he attempted to get the boy admitted to school without a written examination. The boy, however, could not answer the simplest questions. In desperation, the dean asked, "How much is seven and seven?"

"Thirteen," the boy answered. "Aw, let him in anyway, dean," pleaded the coach, "he only missed it by two."



Profit by the PAIR!

Take two—they're twin-packed. Simplifies stocking. Speeds handling. Sells matched performance. For double action, double profits: Golden Glides—in the tear-apart twin pack.

GOLDEN GLIDE SHOCK ABSORBER CO., CLEVELAND, OHIO



THE MIDGET, CAPACITY TO $\frac{3}{8}$ " BOLT SIZE,
DRIVES AND REMOVES NUTS, BOLTS AND SCREWS ON:

Brake Diaphragms
Carburetors
Clutches
Deck Lids
Doors
Fenders
Transmissions
Hoods
Radiators
Oil Pans



There's never been an Air-Wrench like the new CP-720 MIDGET

No impact wrench can match these *exclusive* CP MIDGET features: (1) Hand-sized. (2) Only 2½ lbs. (3) Dial type *Power Selector* and *Vari-Tork* *Power Converter* employ an all-new principle to deliver "just the right" impact blow for "job rated" torque control. (4) "Butterfly" throttle, controlled by finger pressure, gives instant forward or reverse power without change of grip. (5) Air intake swivel lets mechanic work in any position without interference. Call your jobber or mail coupon today. *Chicago Pneumatic Tool Company, 8 East 44th St., N. Y. 17, N. Y.*



The *Attachable Angle Head* attaches firmly to special nose section . . . permits one-hand operation in ratchet wrench spots.

CALL YOUR JOBBER OR MAIL THIS COUPON TODAY!

Chicago Pneumatic Tool Company, Dept. A-38
8 East 44th Street, New York 17, N. Y.

☐ Please arrange demonstration. No obligation!

☐ Please send me FREE CP-720 MIDGET literature SP-3199

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____



Chicago Pneumatic

AIR AND ELECTRIC IMPACT WRENCHES • BEAD BREAKERS • ZIP-GUNS • PNEU-DRAULIC TRUCK JACKS AND PUMPS

Chilton's MOTOR AGE, JUNE, 1957

Generator Troubles . . . Continued from page 43

sulation between the copper segments should be undercut to a depth of 1/32 inch. This is generally accomplished by using a hacksaw blade ground down to the thickness of the insulator or a special cutter made for this purpose.

Next, check the armature for

short circuit on a growler. While the armature remains in the growler, use a test lamp to determine the condition of the armature. This is accomplished by placing one lead of the test lamp on the armature core and the other lead on the commutator. If the lamp lights the armature is

grounded and should be replaced.

Checking Field Coils

Now to check the field coils for an open circuit. Put one lead of the test lamp on the field terminal outside of the housing while the other lead is pressed against the armature terminal. If the lamp does not light, the field coils are open and should be replaced. In some instances a loose connection may be the cause. The connection should be soldered.

To check the field coils for ground, rest one lead of the test lamp against the field terminal on the generator housing and the other lead ground to the housing itself. Should the test lamp light, the field coils are grounded and should be repaired or replaced.

To determine condition of terminal insulation, touch one lead of the test lamp to the output terminal, the other lead to a ground on the housing. If the lamp lights, the terminal insulation is broken and should be replaced.

Finally, the brush holders should be checked for ground. Still using a test lamp, put one lead on the insulated brush holder and the other lead on the generator housing. If the brush holder is grounded the lamp will light. This shows a defective insulation at the housing.

After all these tests are completed and the generator is re-assembled, both the regulator and the generator should be balanced on a test bench.

In any case where the generator is found defective and the regulator is not at fault, the regulator should be removed, contacts checked and reset to specifications.

Autobody repair takes Craftsmanship . . . and Good Materials !



Thousands of fine body repair shops throughout the United States use Federated's Star Body Solder exclusively. It is a premium product designed specifically to produce better results faster.

The familiar Star shape is more than a trademark. It has these four advantages:

- 1 — It requires less heat to melt . . . is less apt to distort thin panels.
- 2 — The bar is easier to handle and hold.
- 3 — Because the Star shape is exposed to the torch in thin points it melts easier and faster.
- 4 — It saves waste. Solder flow is more easily controlled. It does not run off the work.

Let your jobber tell you more about Star Body Solders. Or write us directly for details.



Federated Metals



Division of

AMERICAN SMELTING AND REFINING COMPANY

120 Broadway • New York 5, N.Y.

In Canada: Federated Metals Canada, Ltd., Toronto and Montreal

Too much money in a guy's pocket sometimes crowds out the common sense in his head.

count on

CARTER



FUEL SYSTEMS

for fuel filters that pull in profits

Now, pull in more profits with the strong sales attraction of these famous Carter Fuel Filter Assortments: Specially designed Ceramic Filtering Element with microscopic pores. Carter's exclusive Magnatrap®, a powerful permanent

magnet that fits inside any Carter Fuel Filter, traps and holds smallest particles of iron oxide which can cause flooding. Filters to fit nearly any make or model of car or truck. Call your Carter supplier for complete details.



MODERN FUEL SYSTEMS

CARTER CARBURETOR

DIVISION OF **OC** INDUSTRIES

INCORPORATED
ST. LOUIS 7, MISSOURI

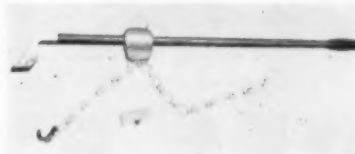
New Products Continued from page 63

each tenth volt, allows for individual cell analysis. Write: **King Electric Equipment Company (M.A.)**, 9123 Inman Avenue, Cleveland 5, Ohio.

Body Shop Tool

A new tool has been designed

recently which, according to the



manufacturer, is an all-purpose tool. It is said to be a steel bar,

link chain, hook and pressure plate combined with a cast aluminum carrier. Known as the **Ram-Rod**, it is said to align, hold, pull, pushes and springs fenders, hoods, grilles, doors, bumpers, panels and body parts difficult to reach. The **Ram-Rod** is said to have a safety feature in the first link of the chain. This consists of a "lap-link" that "eases out" beyond one ton pressures, thus preventing a sudden break or excessive pressure at the fulcrum. Write: **G & W Merchandising Corporation (M.A.)**, 1933 East Main Street, Rochester, New York.

Wow!



...Does he need new
Shock absorbers!
...and so do
30,000,000 other
drivers

1957 will be the biggest year in history for shock absorber replacements. More than 30,000,000 cars need new shocks **NOW!** Get your share of the *big profits* in this business by putting **BRIGGS'** new, exciting and colorful sales aids to work for you. A few of them are shown at right. Ask your jobber to show you the complete program. Do it today!

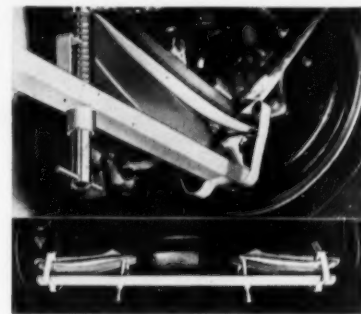
The Briggs Shock Absorber Company
1148 Euclid Avenue • Cleveland 15, Ohio

And here's how **BRIGGS**
helps you sell
more **SHOCKS!**



Height & Leveling Gage

A suspension height and level-checking gage for use on '57 Chrysler-made cars equipped with Torsion-Aire front suspension is now being introduced. The gage, Model 54, is said to permit leveling within plus or minus 1/16 inch. The company states that in operation the gage holds itself in position through use of spring clips. Pads fit



against the lower ball joint housings. While calibrated, spring-loaded measuring pins snap against the lower control-arm bushing housing. Scale divisions on the measuring pins indicate critical height measurements directly in 1/8 inch increments. Construction of the gage, it is said, permits it to be left in position until alignment cycle is completed, and so permits adjustment of the torsion bars

(Continued on page 116)

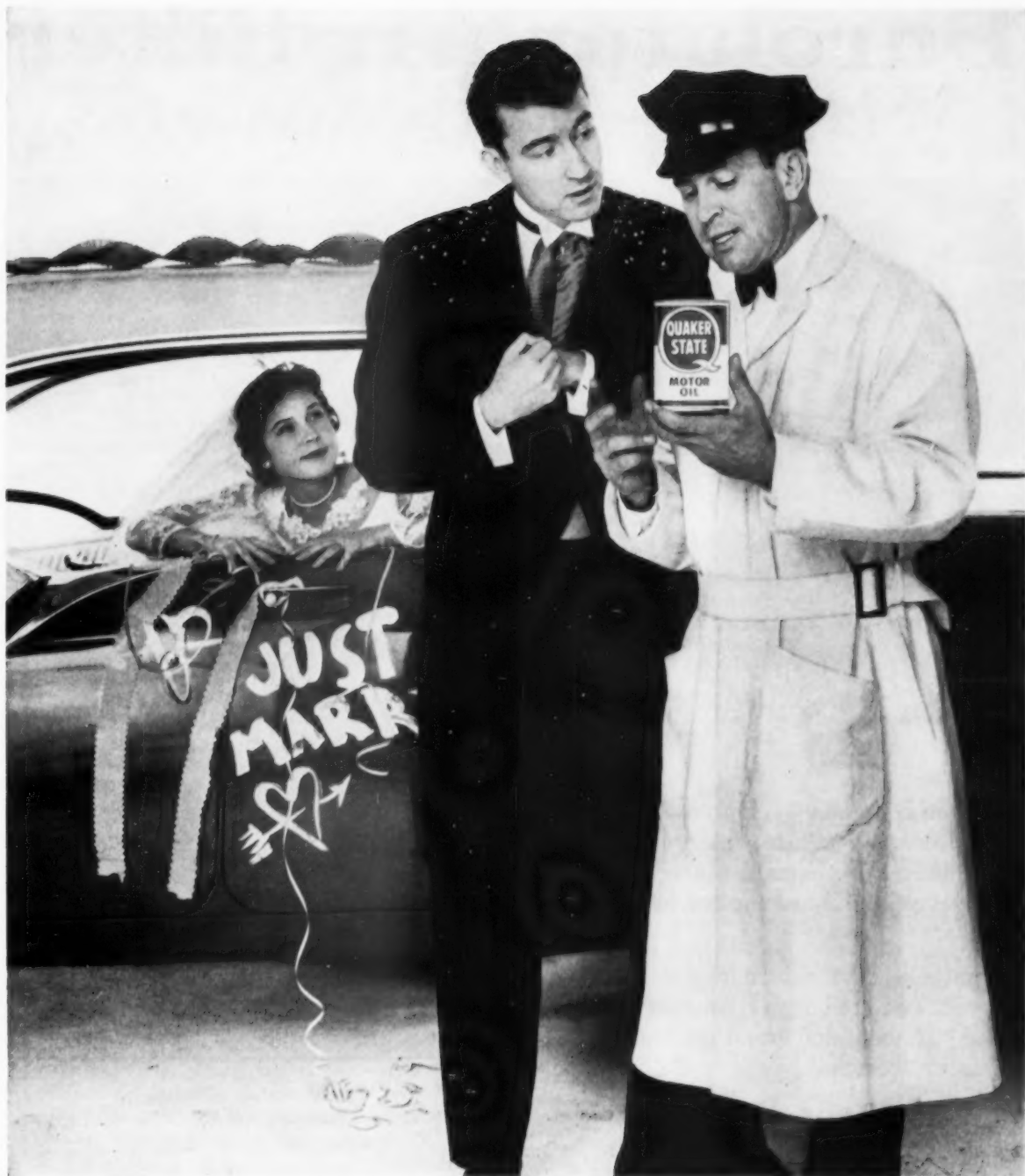
FOR BIGGER PROFITS... BIGGER SALES... SATISFIED CUSTOMERS... IT'S

BRIGGS

**HYDRO-MUSCLE
RIDE CONTROL**



FOR THE RIDE OF YOUR LIFE... FOR THE LIFE OF YOUR CAR

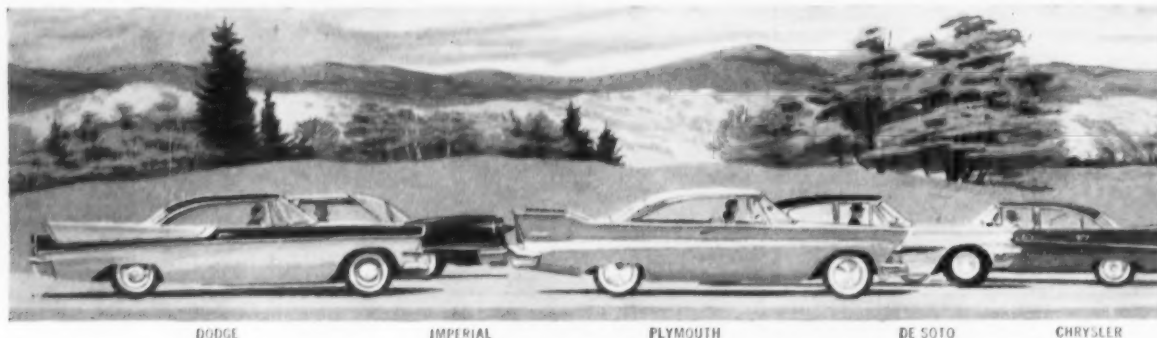


Let's get to the point without delay. You build business by pleasing customers. And the finest customer-pleaser is **Quaker State Medium**, the one motor oil that's best for all summer driving!



QUAKER STATE OIL REFINING CORPORATION, OIL CITY, PA. • MEMBER PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION

Purolator Air Filter



Purolator Air Filters open a great new sales market that covers the complete 1957 Chrysler and Ford line!

Now you can really begin to cash in on extra sales and profits with Purolator Air Filters . . . extra business you'll enjoy over and above present oil filter volume.

That's because right now most 1957 Chrysler and Ford cars—10 makes in all—are just about due for a Purolator Air Filter replacement.

Be sure you have an ample stock of Purolator Air Filters on hand—ready to capture your share of the newest, fastest growing profit opportunity in filter sales.



Changing Dry Air Filters is clean and easy!

No messy rags—no need for a gasoline bath. Simply lift out the old filter, insert the new one . . . and the job is done.

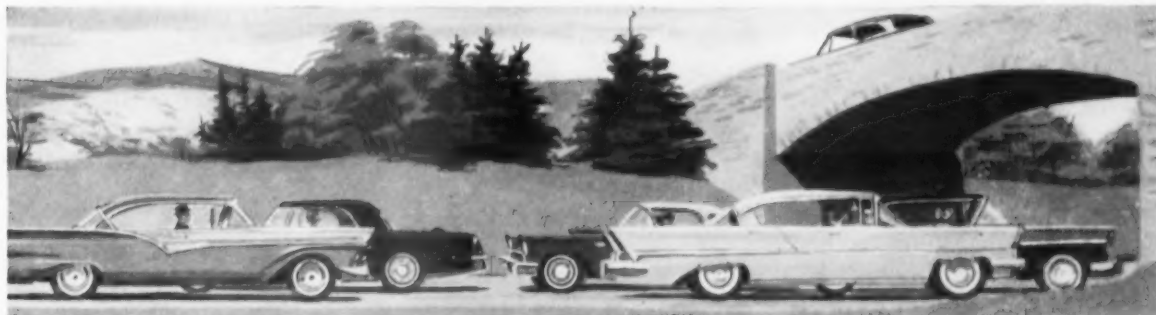
Purolator gives you everything needed to make Air Filters pay off today!

From shop data to promotional aids—Purolator has it all. And it's made-to-order for building the "come again" sales volume that's like money in the bank.

Be sure you get and use the whole Purolator Air Filter sales package.

PUROLATOR PRODUCTS INC., Rahway, N. J.; Toronto, Ontario, Canada

Business *is on the road—NOW!*



FORD

CONTINENTAL

THUNDERBIRD

LINCOLN

MERCURY

These 1957 cars are ripe prospects for a
new Purolator Air Filter

	PUROLATOR AIR FILTER	RECOMMENDED MINIMUM DEALER INVENTORY
PLYMOUTH		
V-8 Models (with 2-barrel carburetor)	AFP-4	3
V-8 Models (with 4-barrel carburetor)	AFP-1	3
6-Cylinder Models	AFP-3	2
DODGE		
V-8 Models	AFP-1	(incl. above)
6-Cylinder Models	AFP-4	(incl. above)
CHRYSLER and IMPERIAL		
All Models	AFP-2	3
DE SOTO		
All Models	AFP-2	(incl. above)
FORD and THUNDERBIRD		
V-8	AFP-5	4
Thunderbird	AFP-8	1
6-Cylinder Models	AFP-6	2
MERCURY		
Turnpike Cruiser	AFP-7	2
All Other Models	AFP-5	(incl. above)
LINCOLN and CONTINENTAL		
All Models	AFP-7	(incl. above)
	Total	20

Stock these fast-moving Purolator Air Filters for fast profit



What a team to clean up with!

PUROLATOR
OIL AND AIR FILTERS

"Purolator" Reg. U. S. Pat. Off.

New Products Continued from page 112

while gage is in position. Write: John Bean Division, Food Machinery and Chemical Corporation (M.A.), Lansing 4, Michigan.

New Valve Tool

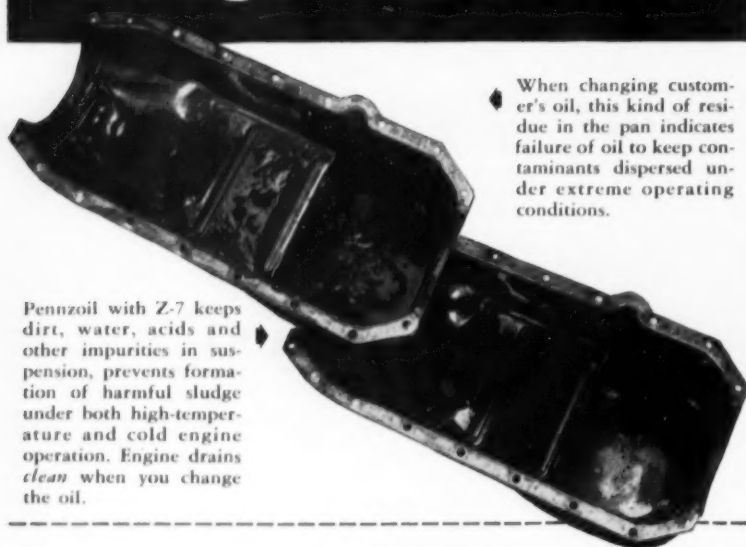
A new valve tool for installa-

tion and removal of rubber



snap-in valves has been introduced. The tool is designed to accommodate, the company states, all size valves for either 14 inch or 15 inch wheels in any size rim. It installs valves by applying pulling pressure and with additional pressure, will remove a valve by pulling it completely through the hole, the company states. Write: Dill Manufacturing Company (M.A.), 700 East 82nd Street, Cleveland 3, Ohio.

SOLVES ENGINE Sludge Problems!



When changing customer's oil, this kind of residue in the pan indicates failure of oil to keep contaminants dispersed under extreme operating conditions.

Pennzoil with Z-7 keeps dirt, water, acids and other impurities in suspension, prevents formation of harmful sludge under both high-temperature and cold engine operation. Engine drains clean when you change the oil.



Customer satisfaction—for keeps!

You can save your customers the costly trouble that grows out of sludged-up engines. Just switch them to Pennzoil with Z-7. This different kind of 100% Pennsylvania oil is blended with an exclusive ingredient that stays active as long as it's in the engine, prevents formation of power-stealing deposits, keeps every part protected from sludge for keeps. It's a sure way to customer satisfaction—to more profitable service business.

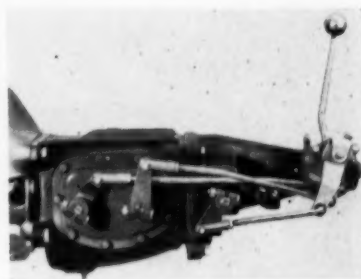
Available in all correct service grades.

Get the complete Pennzoil profit story NOW!

Cash in on Pennzoil acceptance . . . call your nearest Pennzoil distributor or write Pennzoil, Box 78, Oil City, Pennsylvania.
MEMBER PENN. GRADE CRUDE OIL ASSN., PERMIT NO. 2

4-Speed Transmission

A four-speed close-ratio transmission designed for sports car driving was announced optional equipment on the Corvette. According to the manufacturer, the four forward speeds of the new transmission are synchronized and the close ratio gears permit easy down-shift to make use of the engine for braking as



a safety factor. The company states that quick shifting through the gears, up or down, is possible with the manual "stick" mounted at the driver's side. Write: Chevrolet Motor Division, General Motors Corporation (M.A.), General Motors Building, Detroit 2, Michigan.

New Nylon Tire

A newly-developed nylon white sidewall tire will soon be made available. These new "Firestone 500" nylon tires will be offered on the 1957 Mercury models. According to the Mercury Division, the four-point safety fea-

(Continued on page 120)

De Soto Sales In Upward Trend

DETROIT—De Soto sales in January and February have increased 11 per cent over the first two months of 1956.

Sales were equal to the first two months of the record year of 1955, according to J. B. Wagstaff, De Soto vice president. In the 12 months of 1956 De Soto reported more than a 15 per cent increase in its price class. It was one of five automobile manufacturers to increase its share of the total market in 1956.

1957 De Soto Sales Continuing Upward

DETROIT, March 12.—De Soto sales in January and February 1957 were equal to the first two months of 1956, according to J. B. Wagstaff, De Soto vice president. In the 12 months of 1956 De Soto reported more than a 15 per cent increase in its price class. It was one of five automobile manufacturers to increase its share of the total market in 1956.

Increase Noted In DeSoto Sales

DETROIT, March 15. (Special)—De Soto sales in January

DeSoto Series Successful In Its First Year

A new series of cars, called the De Soto Firesweep, successfully established itself as a permanent member of the De Soto line.

Since its introduction five months ago, the Firesweep has accounted for 32.8% of total De Soto sales and has moved strongly in the lower medium price field, steadily increasing its penetration.

Mr. J. B. Wagstaff, vice president, De Soto Division, Chrysler Corp., said:

De Soto Reports Climb in Sales

DETROIT, March 12.—De Soto sales in January and February have increased 11 per cent over the first two months of 1956.

Wagstaff said sales were equal to the first two months of the record year of 1955.

De Soto Hails Success Of New Series

The Firesweep made its appearance at the time of the introduction of the 1957 De Soto line last fall. The Firesweep carries a lower price tag than other of the other two De Soto lines, the Firebird and Firebird.

Firesweep Now Member Of De Soto Line

A new series of cars, called the De Soto Firesweep, has been

it pays to be a De Soto dealer!



meet America's newest, most talked-about volume car . . . De Soto FireSweep

Tom Kleene:

Detroit Times Automobile Editor

De Soto Division, Chrysler Corp.
Initial quarterly returns

Permanent

Response to the DeSoto Firesweep models has been so

Lower Price Models Boosting De

The De Soto's move into the lower medium price class for the addition of a new series to its 1957 model lineup appears to be paying dividends.

Judging by early model year reports, it is not unlikely that the new Firesweep series in a 13.4 per cent increase in the De Soto's sales rank in the industry's sales race.

The 1,000 additional sales De Soto had in January as compared to last January has put this division in tenth position at the outlet, which is a higher spot than it ever held for any full year in its nearly 30 years in the market place.

The division's market penetration also is running higher than it was a year ago (1.9 as against 1.7 per cent), and apparently still climbing.

The Firesweep is priced from about \$170 to \$250 less than comparable Firebird models (except for station wagons), which places it in competition with such entries as the Oldsmobile 88, Pontiac Star Chief, Dodge Custom Royal, Nash Ambassador, Hudson Hornet, Mercury Monterey and others.

The new series gives De Soto a car priced to cover about 19 per cent of the market in

which the division previously had not had representation.

If the low price class is eliminated from consideration, the three De Soto series now are offered in a price range that includes 51 per cent of new car sales. With only the Firebird and Firebird series, this range only had about a 72 per cent coverage.

PRICE FACTOR

How much of the De Soto line's success in the 1957 model year may be attributed to the move down into the lower price field where the competition is nearly as intense as it is among the low-priced lines?

J. B. Wagstaff, De Soto vice president in charge of sales, replies that as of March 10, about 33 per cent of 1957 model sales had been in the Firesweep, Firebird line, then the Firebird's first-year but more than the Firebird's.

More than three-quarters of Firesweep buyers represent "converts" who have traded in competitor makes. Wagstaff stated in an interview, while making the point that the new series is "not just living off our own fat."

Nearly two-thirds of these "converts," he added, have been driving a make other than those built by Chrysler total DeSoto sales and is

11%

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The new FireSweep series is accounting for one out of every three De Soto sales. Such rapid public acceptance for a totally new car is almost unheard-of in the industry.

But the FireSweep's success goes far beyond press clippings. It gives De Soto dealers a complete line that meets the competition on every level in the medium price field. That's helped boost De Soto's market penetration by 14% over last year. The new De Soto FireSweep is one more proof that now—as never before—it really pays to be a De Soto dealer!

DeSoto Firesweep, has successfully established itself as a permanent member of the DeSoto line, says Col. J. T. "Jim" Hamrick of

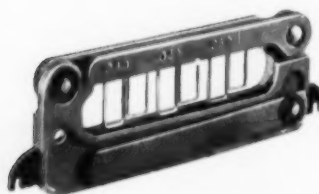
charge of sales, also says that its new Firesweep model, introduced in the fall, is currently accounting for 35% of De Soto sales. Because



**CHAMPION ABRASIVE
COMPOUND #633**

1 For Champion "dry abrasive" spark plug cleaners. Contains one full charge of abrasive, one #622 Nozzle Tip, one #522A Nozzle Tip, one #522B Gasket

50c per can



WG-300 GAP TOOL

2 Multipurpose tool for gauging, dressing and setting electrode gaps. Also checks used gasket condition. Tough "Tenite II," steel-reinforced body, 3 3/4" x 1 1/4". Weight 9/10 oz....74c



AG GASKET VENDER

3 Holds 200 assorted gaskets: 10mm., 14mm., 18mm., and 7/8" sizes. Unit size 4 5/8" x 6" x 2"....\$2.50 per unit

How these 6 Champion service aids can help you make more money from spark plugs

These low-cost items make plug servicing both easy and profitable. They also show which plugs should be replaced—and demonstrate the need for replacement in a manner that convinces the most skeptical customer

These six Champion service aids help you properly clean, re-gap, and check spark plugs—quickly and easily. They can make plug servicing profitable. And they can pave the way for many additional sales of Champion Spark Plugs.

Most customers are "from Missouri." They want to be sure they aren't scraping good plugs. The Champion 700 Series Service Unit and the PM-1 Spark Plug Viewer dramatically demonstrate the need for replacement when used on worn-out plugs. They convince even the most cautious customer.

You need these six Champion service

aids to make the greatest possible profit from the tremendous spark plug replacement market. If you don't have all of these low-cost aids—in top condition—order them from your wholesaler now.

Then make it a regular habit to ask customers if you can check their plugs. And when you do, be sure you have an ample supply of popular Champion Spark Plugs on hand. You'll need them.

*Sincerely,
Jim L*



America's favorite—
5-rib

CHAMPION

SPARK PLUGS

P.S.—Champions still lead the racing parade. Like Cotton Owens, who won the NASCAR Grand National at Daytona in a Champion-powered 1957 Pontiac, 9 out of 10 racing drivers insist on 5-rib Champion Spark Plugs.

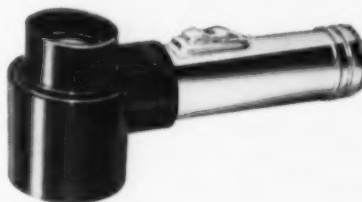


**SPARK PLUG
FIRING INDICATOR FT-2**

4

Flashes provide fast, simple and effective check of voltage to plug. Works on standard or rubber covered plug terminals. Handy pocket clip. Length 4 $\frac{3}{4}$ ". Diameter $\frac{5}{16}$ "

\$1.00



PM-1 SPARK PLUG VIEWER

5

Magnifying light for close inspection of electrodes and insulator. Reveals incomplete cleaning. Dramatizes need for new plugs. Has 2 $\frac{1}{2}$ magnification lens in tough, durable "Tenite" housing. Chrome-plated battery case. Tool rack mounting ring. Flashlight batteries extra. 8" x 3" x 2 $\frac{1}{4}$ "

\$3.50



700 SERIES SERVICE UNIT

6

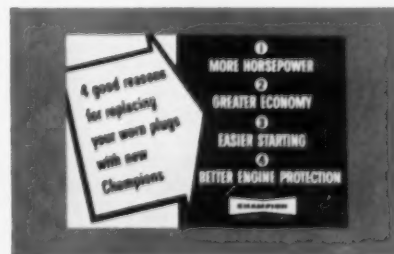
The heart of your spark plug sales and service operation. For better results in profit and efficiency, replace your old unit with one of these improved, modernized Champion units. Compares old-plug performance against new Champion Spark Plug. Cleans hard-to-reach areas. New features include: sturdier legs; recessed spark viewer for better, safer vision; more conveniently located adapter holders; larger comparator gauge (a Champion exclusive). Height 43 $\frac{1}{4}$ " (including 27 $\frac{1}{8}$ " legs). Width at floor 20 $\frac{3}{4}$ ". Depth at floor 15 $\frac{3}{4}$ ". Compressed air requirements, 120-180 P.S.I. Also available in bench model. **Only \$49.95**

Ask your wholesaler for these **FREE** Champion Sales Displays

These Champion display pieces promote plug sales. They feature the powerful "make your car 4 ways newer" theme that Champion runs every month in leading publications reaching millions of motorists. Get your displays now and build sales.



This colorful counter display piece (approximately 22" x 15" x 6") shows customers just exactly how Champions can make their cars "4 ways newer." This dramatic, easy-to-understand display helps sell more Champions.



Hard-hitting wall and window banner (16" x 24") quickly tells the highlights of the "4 ways newer" story. It reminds even the most casual observer of Champion's benefits... and of the need for replacing worn plugs.

CHAMPION SPARK PLUG CO. • TOLEDO 1, OHIO

Chilton's MOTOR AGE, JUNE, 1957

New Merchandise . . . Continued from page 116

tures of the tires are: the greater strength of nylon provides a greater safety margin in highway driving; nylon tires run cooler; nylon cord body is stronger; nylon is impervious to moisture which penetrates from small cuts. Write: *Mercury Division, Ford Motor Company*

(M.A.), 3000 Schaefer Road, Dearborn, Michigan.

New Seat Cover Box

A harlequin-patterned white-gold-and-black package will carry a new 1957 seat cover line, the manufacturer states.

The new corrugated board package, according to the company, is designed to increase the at-



tractiveness of in-store cover displays. Company identification and code and color numbers appear on the end panel of the package. Write: *The Howard Zink Corporation, Fremont, Ohio.*

THE MOST DEPENDABLE

FOR AUTOMOTIVE ELECTRICAL SYSTEMS

When you specify "Silver Beauty" by Triple A, you can be sure you are getting the best available in automotive parts. Leadership in the field since 1921 and the proven performance of quality products are among our most valued assets.



Silver Beauty

AUTOMOTIVE WIRE



CABLES AND STRAPS



BATTERY TERMINALS



SOLDERLESS TERMINALS



WIRE TERMINALS



RAJAH TERMINALS



CRIMPING TOOLS



CLIPS



HOLD-DOWNS



JUMPERS



TRIPLE A SPECIALTY COMPANY • CHICAGO 12, ILLINOIS

Shop Light Display

A display packer holding phenolic shop light handles has been introduced. According to the manufacturer, the phenolic handle features a Levolver tossle-action switch, side convenience outlet and built-in strain relief. It is said that each unit, which



comes complete with the chrome plated reflector, swing open guard and reinforced hanger hook, is individually packaged in a simulated leather box, and each lot of six is packed in a black and yellow merchandiser. Write: *Cordomatic, Division of Vacuum Cleaner Corporation of America (M.A.), 17th to 18th & Indiana Ave., Phila. 32, Pa.*

(Continued on page 122)



Primer-Surfacer drying test shows how to speed up spot repairs

• To prevent time-wasting delays, *test* the drying time of your primer-surfacer. You'll get really fast drying with Duco® Lacquer High Speed Primer-Surfacer. It gives you *all the speed that can be built into any primer-surfacer without sacrificing other easy-working features*. It fills fast, dries fast, sands fast—and has a beautiful color holdout for high gloss with less rubbing. That all adds up to important shop savings. And with its economical reduction—1 gallon gives 3 at the gun—High Speed “Duco” Primer-Surfacer actually costs *less* than many so-called “bargain” primers. It pays to get the best—“Duco” Primer Surfacer!

*Fast-drying
Easy-sanding
Money-saving*

“DUCO” LACQUER HIGH SPEED PRIMER-SURFACER

DU PONT REFINISHING MATERIALS



BETTER THINGS FOR BETTER LIVING.
... THROUGH CHEMISTRY.

Car Rug Display

A wrought-iron display rack for displaying car rugs has been introduced. According to the manufacturer, the rack package includes one set of the front floor coverings and promotional material for jobbers and consumers. The dual car rugs, it is said,

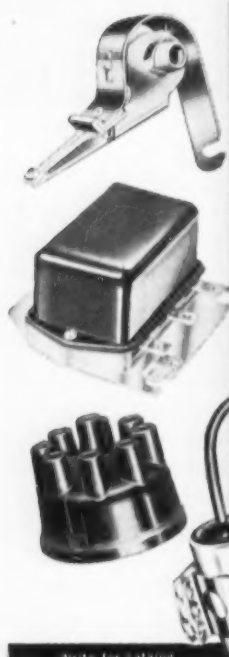
come in eight sets of assorted colors. Colors were selected to harmonize with the interior decors of late model automobiles. Write: *The Dayton Rubber Co. (M.A.), Dayton, Ohio.*

New Can Design

A new label design has been

announced by Shell Oil Company of New York for its X-100 "Regular" and "Premium" motor oil cans. According to the company, the new containers were designed to fit in with the company's desire for a worldwide label motif. The design distinguishes the two types of oil by using red for the Regular and white for the Premium product. Write: *Shell Oil Company (M.A.), New York, N. Y.*

*never use a
lightweight for
a* **HEAVY-DUTY** *job!*



specify and use
TUNGSTEN...
the **HEAVY-DUTY**
IGNITION LINE!

Today's high-compression, high-speed motors call for heavy-duty ignition parts — nothing else will fill the bill. That's what makes it smart business to stock your shop with TUNGSTEN Heavy-Duty Ignition replacements. They're made right — they fit right — they last longer and they're lower in price to start with!

Jobbers and Servicemen are making it a habit to use TUNGSTEN Ignition for replacement and for complete tune-ups. They like the simple TUNGSTEN cataloging, the easy-to-read packaging and the modern, tailored-to-their-needs service assortments. What they like most of all is the handsome profits TUNGSTEN leaves. Are you getting your share?



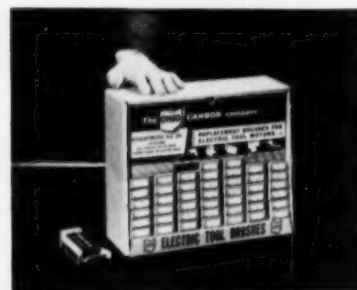
WAREHOUSE DISTRIBUTORS: TUNGSTEN has a sure-fire plan for building your profits — for keeping you in business. Write at once!

Write for Catalog

TUNGSTEN CONTACT MFG. CO., North Bergen, N. J.

Replacement Brush Set

A selection of replacement brushes for electric hand tools in a compartmented counter display box is now being marketed. According to the manufacturer, the No. 20 assortment contains



128 brushes which will service 803 different models of 23 electric hand tool brands. It is claimed that the set has been proportioned to sell out as evenly as possible and that selection was made after study of long-term sales records. Write: *The Ohio Carbon Co. (M.A.), Dept. 9, 12508 Berea Road, Cleveland 11, Ohio.*

Literature

Illustrated Catalog

An illustrated catalog covering automatic transverse spray finishing machines has been issued. It is said that transverse machines of four types are covered in the catalog, horizontal straight line, and contour, vertical straight line and contour machines. Models and specifications (Continued on page 125)

"No car on the road handles like this Dodge!"

PROVING GROUND REPORT NO.

1

Torsion-Aire Ride



'Way outside Detroit, there's a guy who drives a new '57 Dodge—and all its competitors—around and around a brutal course. It's loaded with curves, hills, soft gravel, chuck-holes, and bumps.

This is test-driver Dick Schanz. And what does he say these days?

"I'm not kiddin'—no car on the road handles like this Dodge. When you turn a corner, you *know* you're going 'round that corner. And I mean 25-30 miles an hour faster than I can take them with other cars. Its lower center of gravity and new suspension snug it into the road. When I take her down a stretch, I just set back. These torsion bars keep it straight as a string.

"And its ride relaxes you. It's like settin' home in a chair. It's really fun to go out and drive it!"

Dick's talking about dramatically new Torsion-Aire Ride. Why not drop over to your Dodge Dealer's and try this ride yourself?

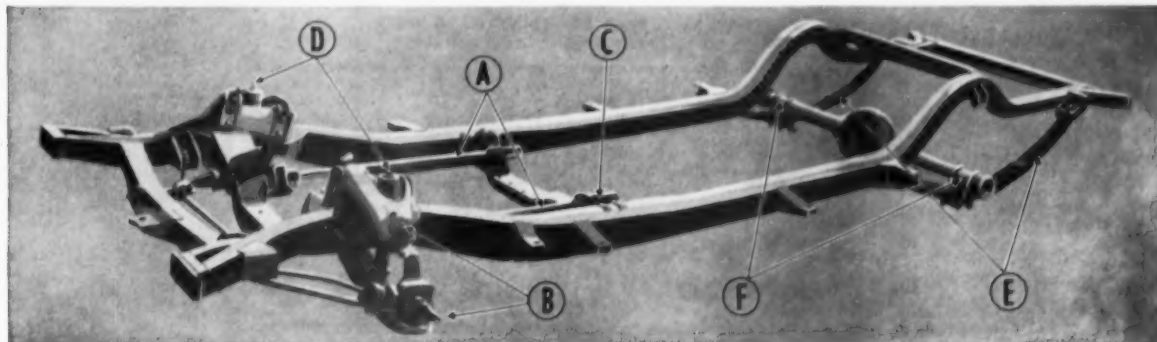
Step into the wonderful world of Autodynamics



SWEPT-WING
'57 Dodge

There's a lot to revolutionary Torsion-Aire Ride. (A) Torsion-bar springs up front, most efficient automotive springing ever devised. Driver Schanz has deliberately tried to crack Dodge torsion bars and has given up. (B) Completely new ball joints give better steering "feel." (C) Manual device to adjust car height. (D) New-valving shock absorbers flatten

roads. (E) Outboard-mounted rear springs minimize body roll and "lean" on curves. (F) Rear axle mounted forward on rear springs to absorb torque. And there's much more, too: Anti-brake dip mountings. Larger tires with more rubber and air to soak up road noise and shock of its source. "Live rubber" wherever suspension system meets the frame.

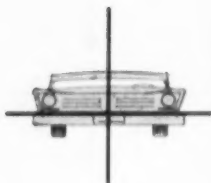




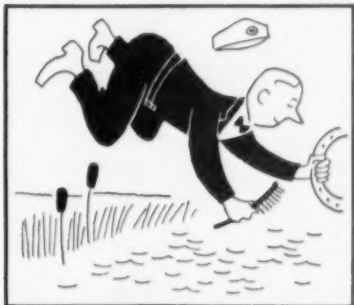
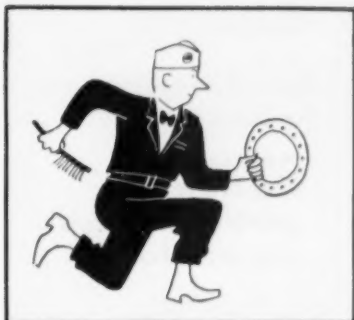
Everybody's looking at Gabriel advertising

All through 1957—in all these favorite magazines—Gabriel will be the best-advertised line in the shock business. And that means Gabriel is the most salable line *for you*. Only Gabriel offers you so much: famous HydrOshox and Silver "E"; exclusive AjustOmatic; a name your customers know and trust. All these advantages are yours to use. Profit from them now . . . with Gabriel.


THE GABRIEL COMPANY, CLEVELAND 5, OHIO



Gabriel
AJUSTOMATIC
SHOCK ABSORBERS




Bendix
METAL/clene



For the toughest cleaning jobs, Bendix* Metal/clene is tops. You dip dirty metal parts in Metal/clene—and they come out clean. No brushing, no scraping, no heating. There are many imitations—there is no substitute.

Bendix
E-CON/O/clene



Bendix* Econoclene is a multi-purpose cleaner concentrate that makes ten gallons from one by mixing with solvent or kerosene. It removes oil, grease, resins and tars; can be used as a spray or a dip; has high rinsability in hard or soft water. *REG. U. S. PAT. OFF.

BENDIX PRODUCTS DIVISION,
BENDIX AVIATION CORP.,
SOUTH BEND, IND.

Literature . . .

Continued from page 122

cifications of the horizontal and vertical straight line types are included, the company states, as well as typical uses. Contour machines in both types are described. Write: *The DeVilbiss Company (M.A.), Toledo 1, Ohio.*

Merchandising Kit

A new merchandising kit promoting mufflers is now being offered by the manufacturer. According to the company the contents of the kit includes window posters, inspection tags, decal and hand-out folders. Advantages of power, mileage and appearance are explained and illustrated in a six-page dual exhaust system folder. Write: *Merit Muffler (M.A.), Toledo, Ohio.*

Filter Service Manual

A new service manual covering installation of both oil and air filters has been issued recently. The twenty-four page booklet is printed in two colors and is said to give detailed photographic instructions for servicing filters on late models as well as older cars. Included are servicing and changing instructions on the Micronic dry-type air filter as well as directions on servicing the PER-1 disposable oil filter. The service manual is said to list tools needed to service automotive filters, and to give step-by-step picture instructions on the removal of used filter elements and the replacement of fresh ones. Write: *Purolator Products, Inc. (M.A.), Rahway, New Jersey.*

Battery Handbook

A handbook on facts about storage batteries has been re-
(Continued on page 126)

**Get a
Gabriel
shock tester
FREE!**



Now yours in Gabriel's new all-in-one Tester Assortment. Eight fast-moving, high-profit Adjustomatics, plus exclusive on-car tester and other sales tools packed in one carton. See how easy it is to clear \$30-\$40 a day—the Gabriel way! Ask your jobber.

Gabriel
SHOCK ABSORBERS

The Gabriel Company, Cleveland 15

MAKE US PROVE IT!

Meguiar's MIRROR GLAZE

will positively increase your

POLISH DEPARTMENT PROFITS!



MIRROR GLAZE

- ★ Does a better job
- ★ Creates repeat customers
- ★ Eliminates kick-backs

Factory-trained sales and service representatives coast-to-coast will prove Mirror Glaze superiority—without cost or obligation.

Write Today to
Mirror Bright Polish Company
Pasadena 8, California

MIRROR BRIGHT POLISH CO., Dept. MA
P. O. Box 234M, Pasadena, Calif.

- ☐ We'll make you prove it! Have your salesman call at no cost or obligation.
- ☐ Just send FREE folder.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____

STATE _____

Literature . . .

Continued from page 125

leased recently. The manual is said to tell the car owner how to care for his battery, how to get the most from it, how to select, test, recharge, install and remove it. The manual also contains an explanation of how a storage battery is made and what it does. It shows in description and illustration the design and elements of an automotive electrical system. Write: Dept. No. 13 (M.A.), Exide Automotive Division, The Electric Storage Battery Co., P.O. Box 8109, Phila. 1, Pa.

Tire Valve Catalog

A catalog sheet, detailing a line of tubeless tire valves for 1957 cars, has just been published. It is said that seven types of valves are illustrated and described. They are designed to handle requirements for passenger car tubeless tires for both 14 in. and 15 in. wheels. The literature describes which valve types are required for various manufacturers' models, effective length of the valve and type of package available. One section is devoted to specifications of valve extensions. Also pictured and described is the company's new valve tool for installing and removing rubber snap-in valves used in any size rim. Write: Dill Manufacturing Company (M.A.), 700 East 82nd Street, Cleveland 3, Ohio.



**BIG differences
in design . . .**

**make
BIGGER
DIFFERENCES
on the job**



CHAN NEL LOCK

No. 420

Only Channellock No. 420 has undercut, interlocking channels that can't slip or "jump out". The tighter you grip, the tighter they lock. And *only* Channellock has the re-inforced tension edge to withstand maximum gripping force. These exclusive gripping features are the reasons why Channellock pliers are the first choice of skilled mechanics . . . everywhere. So when you ask for Channellock, be sure you get *genuine* Channellock. Look for the trade mark on the handle.

CHANNELLOCK
first choice of skilled Mechanics



CHAMPION DEPARTMENT TOOL COMPANY
MEADVILLE, PENNSYLVANIA



The Chevrolet Dealer

Key
man

on the first team!

He sponsors the world-famous Soap Box Derby!

Attracting worldwide entrants and hundreds of thousands of spectators yearly, the Soap Box Derby is the greatest public relations program of its kind in American business. This kind of cooperation and joint activity on the part of Chevrolet dealers and Chevrolet, makes and keeps Chevrolet dealers the *first* team in the automobile industry—traditionally first in car and truck sales, first in community service and first in new business opportunities. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Chevrolet Dealers and Chevrolet
THE FIRST TEAM IN THE AUTOMOBILE INDUSTRY



TOPS FOR TIRES
JOB-DESIGNED
KEN-TOOLS
HAND-FORGED FROM
CHROME NICKEL ALLOY STEEL
FOR EXTRA STRENGTH AND EXTRA LONG LIFE

T-1X 18" Straight Spoon
T-2X 18" Curved Spoon
T-21R 18" Drop Center Tool—eliminates slipping and tube pinching
T-17 New LifeGuard Tube Remover
T-5B 17" All-Purpose Tire Tool—famous favorite for all-around work
T-66 Universal Hub Cap Remover for all cars—prevents maring—keeps cap from dropping—satisfaction guaranteed
T-10 Bead Spreader for casing inspection and repair

SEE YOUR JOBBER on the complete line of Job-Designed Ken-Tools. Forged by the largest exclusive manufacturer of top-quality Tire-changing Tools and Equipment. THE KEN-TOOL MFG. CO., AKRON 5, OHIO.



SOL-SPEEDI-DRI
for dry, safe, tidy floors

New, green-flecked Sol-Speedi-Dri floor absorbent does more... does it better Absorbs—thirsty for oils, greases, liquids. Retains—picks up more... holds more. Covers—goes further than ever. Resists—won't cake, mat, break up, or get "mushy." Dissolves—most dust-free you can buy. Uniform—bag after bag, ton after ton. For sample, see your local jobber, or write Speedi-Dri Div., Minerals & Chemicals Corp. of America, Essex Turnpike, Menlo Park, N. J.



Calendar Of Coming Events

Dealers Conventions

- June 20-23—Independent Garage Owners of America 2nd Annual Convention, Toledo, Ohio.
June 27-30—Michigan Automobile Dealers Assn., Mackinac Island.
Aug. 18-19—Georgia Automobile Dealers Assn., General Oglethorpe Hotel, Savannah.
Aug. 25-27—Automobile Dealers Assn. of West Virginia, Greenbrier Hotel, White Sulphur Springs.
Sept. 6-8—Maine Automobile Dealers Assn., Inc., Samoset Hotel, Rockland, Me.
Sept. 8-10—New York State Automobile Dealers Inc., The Concord, Kiamacha Lake, N. Y.
Sept. 8-10—Automotive Trade Assn. of Virginia, Hotel Roanoke, Roanoke.
Sept. 8-10—Wyoming Automobile Dealers Assn., Sheridan, Wyoming.
Sept. 9—New Hampshire Automobile Dealers Assn., Lake Tarleton Club, Pike, N. H.
Sept. 15-16—Kentucky Automobile Dealers Assn., Sheraton Seelbach Hotel, Louisville.
Sept. 15-17—Colorado Automobile Dealers Assn., Colorado Hotel, Glenwood Springs, Colorado.
Sept. 16-17—Minnesota Automobile Dealers Assn., Nicollet Hotel, Minneapolis.
Sept. 16-17—Wisconsin Automotive Trades Assn., Milwaukee.
Sept. 26-28—Arkansas Automobile Dealers Assn., Marion Hotel, Little Rock.
Oct. 1-3—New Jersey Automotive Trade Assn., Chalfont-Haddon Hall, Atlantic City.
Oct. 2-4—Texas Automotive Dealers Assn., Baker Hotel, Dallas.
Oct. 20-21—Oklahoma Auto Dealers Assn., Tulsa.
Oct. 20-22—Florida Automobile Dealers Assn., Balmoral Hotel, (Baltimore), Miami Beach.
Nov. 3-5—Mississippi Automobile Dealers Assn., Buena Vista Hotel, Biloxi.
Nov. 7—Connecticut Automotive Trades Assn., Hotel Statler, Hartford.
Nov. 10-12—Ohio Automobile Dealers Assn., The Neil House, Columbus.
Dec. 3—Utah Automobile Dealers Assn., Hotel Utah, Salt Lake City.
Jan. 11-15, 1958—National Automobile Dealers Assn., Miami Beach.

Automobile Shows

- Nov. 22-Dec. 1—St. Louis Auto Show, The Arena, St. Louis.
Dec. 14-21—Miami Automobile Show, Dinner Key Auditorium, Miami.
Jan. 3-11, 1958—Upper Midwest Auto Show, Municipal Auditorium, Minneapolis.
Jan. 4-12—Chicago Auto Show, International Amphitheatre, Chicago.
Jan. 4-12—National Automobile Show, New York Coliseum.

General

- June 20-23—Independent Garage Owners of America, National Convention, Toledo.
Sept. 12-14—Automotive Parts Builders Assn., Convention and Trade Show, Congress Hotel, Chicago.
Oct. 17-19—Automotive Wholesalers of Texas Convention and Booth Conference, Hilton Hotel, San Antonio.

QUIET
HAVILAND
MUFFLERS
AT WORK!
Arnold Haviland Co.
Defiance 11, Ohio

1956
DODGE-PLYMOUTH-FORD
EX-TAXIS—Painted Stock Car Colors
AS LOW AS **\$500**
Automatic Transmission, Heater, Defroster, All Good Rubber, Some with Power Steering.
Quantities from 5 to 500. Straight Bodies, Good Grills. Easy to Convert.
Write—Wire—Phone
HAROLD PETERFREUND or MANNY MOUBER
FUTURE MOTORS, INC.
37-01 Queens Blvd. Long Island City, N. Y.
ST 4-6351
N. Y.'s Largest Volume Taxi Dealer

Buy

Bonds

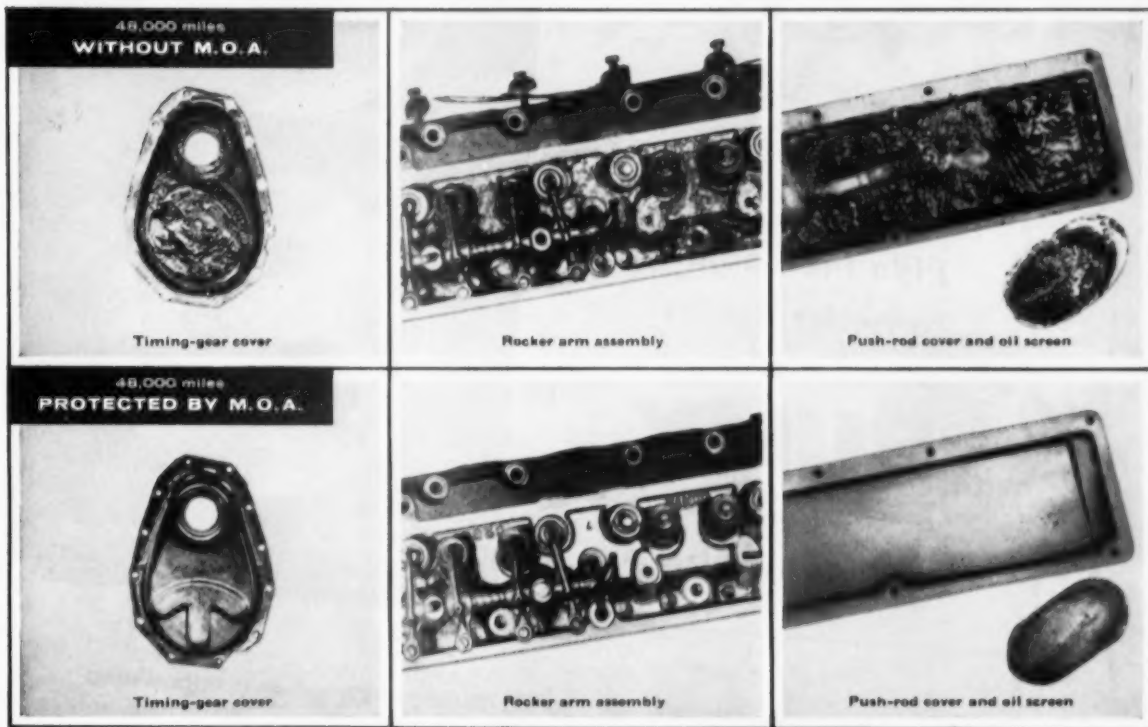


SPECIAL WIRE BRUSHES?
THEY'RE STANDARD AT RIMAC!

There's a "Rimac-right" brush in stock mated to every special cleaning job... Wheel, rotary or hand types—in cable twist, spiral or straight strands.
Illustrated, is popular interchangeable valve guide brush. Ask your jobber or write for literature.

RINCK-McILWAINE, INC.
16 HUDSON STREET NEW YORK, N. Y.

NEW DU PONT M.O.A. KEEPS ENGINES CLEAN, CUTS REPAIRS



New patented discovery prevents low-temperature sludge better than any other packaged oil additive—keeps valves quieter, engine smoother running

These pictures show the reason for many complaints you get about sticky lifters and noisy valves—engine clogging sludge. But now, through 12 years' research and over 4 million miles of road testing, Du Pont has solved the sludge problem.

Radically different from any other additive, new Du Pont M.O.A. stops sludge under *all* driving conditions . . . can actually keep an engine *clean as new*. It is the only packaged oil additive that can do this.

You'll see how well M.O.A. is working every time you check the oil. With M.O.A. the oil turns dark. There's no graphite in M.O.A.—the blackening is caused by the combustion products it *traps* in suspension. With M.O.A., they drain out at oil change instead of sticking to vital engine

parts, clogging oil lines, screen, filter and possibly starving bearings.

Recommend new Du Pont M.O.A. to your customers. They'll be back for more, because this additive really *adds* to the performance of any car!

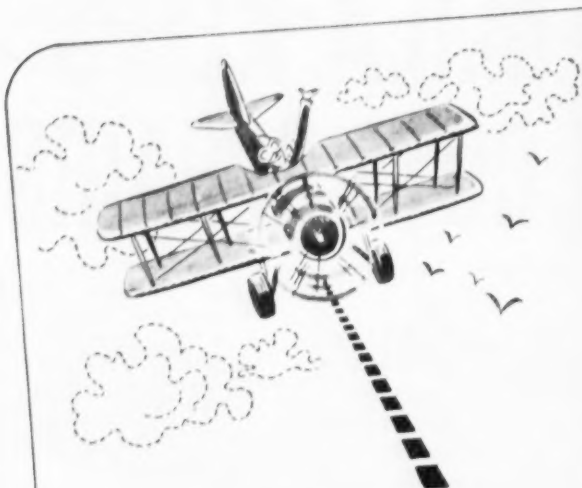
- Prevents noisy or sticking lifters and valves.
- Keeps rings, pistons and other engine parts clean.
- Prevents clogging of oil screens and filters.
- Maintains more constant viscosity.
- Saves gas, oil and costly repairs.



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



NEWEST OF THE DU PONT No "7" PRODUCTS



Ride the beam
to better profits
on front-end jobs
with BUICK
FACTORY ENGINEERED
Replacement Kits

Save Parts Pickup Time by ordering job kits packed in separate cartons. Each carton contains all parts needed to complete any one of the most common front-end service jobs.
Save Shop Time by using job kits containing

Factory Engineered Parts made to original-equipment specifications to fit right, line up right, and furnish satisfactory service.
Buy Them from Your Buick Dealer—at your full discount.

Did You Know that Buick's new front suspension is angled to neutralize braking force so that all stops appear perfectly level?

BETTER WORK WITH
FACTORY ENGINEERED PARTS

SEE YOUR AUTHORIZED BUICK DEALER —Your One-Stop Source for Buick Parts



Stabilizer repair kit



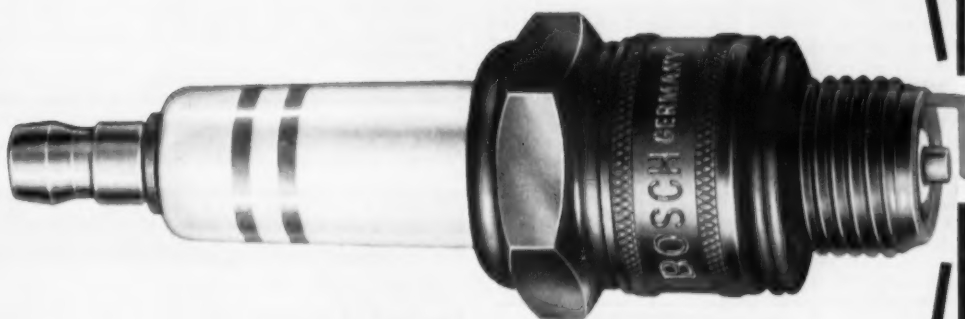
Upper pivot pin kit
See Sections 7 and 8 in your Buick Shop Manual

ENGINEER APPROVED ACCESSORIES



FACTORY ENGINEERED PARTS

ROBERT BOSCH IS BACK!



An invitation — and an important opportunity for repair shops to handle Robert Bosch Spark Plugs

- standard equipment on leading European cars, from Volkswagen to Mercedes
- offering a tremendous market among fleet owners and passenger car owners hungering for the long-life dependability of Robert Bosch Spark Plugs.

Here are products of unique distinction and performance to recommend to your customers. Priced competitively yet free from price wars, they give you a full profit on every sale.

Write for name of nearest jobber and full information about Robert Bosch Spark Plugs, Ignition Coils, Voltage Regulators, Stark-Tone Horns.

ROBERT BOSCH CORPORATION

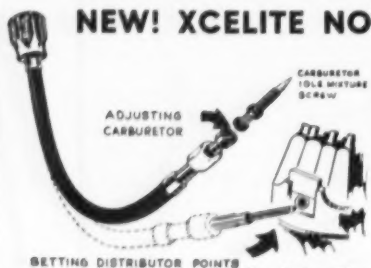
268 Fourth Ave., New York 10, N. Y. • 225 Seventh St., San Francisco 3, Calif.

**Sales and Service Representatives for products
manufactured by Robert Bosch GMBH, Stuttgart.**



Now—Adjust Points AND Carburetors With ONE Tool!

NEW! XCELITE NO. 112



**ANOTHER
XCELITE
"FIRST"**

Flexible Shaft and Quick-Change Chuck Does It!

The new XCELITE No. 112 Dual Purpose Flexible Shaft Unit is the "time-savingest" automotive tool you've seen in years! With hooded screwdriver bit in chuck, you're ready to adjust carburetor idle mixture screws. (New, larger head sizes create no problem—only an additional bit is needed. You *don't* have to buy a new tool to fit any future screw changes.) A quick change to the Allen bit, and you're set to adjust the points on Delco-Remy distributors. Flexible shaft easily reaches "hard-to-get-at" places . . . eliminates the need for fixed-handle Allen bits in varying lengths.

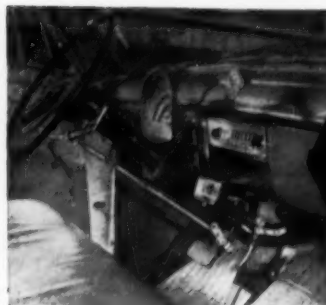
Ask Your Auto Supplier For
The New XCELITE No. 112!

XCELITE, INC.

Dept. K
Orchard Park, N. Y.

In Canada:
Charles W. Pounton, Ltd.
6 Alicia Ave.
Toronto, Ont.

For Originality
LOOK TO XCELITE



**DEALERS!
A 200%
PROFIT
FOR YOU**

Patent No.
2,724,285

ARNOLD HAND DRIVE CONTROLS:

There is an amazingly large demand for hand drive controls today! People who develop foot fatigue during long drives, persons with less than full power in their legs and those with weak arches, women drivers, paraplegics, polio victims, etc. are all prime prospects.

It takes but a little over an hour to install this ingenious device on any car and is guaranteed to last a lifetime! A single lever, attached to the steering post, controls both gas and brake . . . and a slight pressure is all that is needed. Arnold Hand Drive Controls are foolproof . . . are now in use by drivers in every State of the nation. They have been recommended and used by General Motors, Chrysler and Ford dealers everywhere!

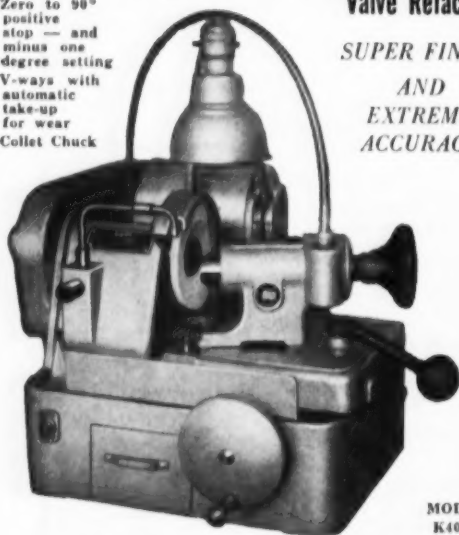
Regular price for this highly polished, nickel plated unit to the driver is \$79.50. **YOUR PRICE IS ONLY \$25.00 ppd. A PROFIT OF OVER 200%!**

Write today for sample unit complete with installation instructions . . . and **FREE** advertising posters.

ARNOLD CORP. OF AMERICA
383 First Ave., New York 10, N. Y.

LEE **LIFETIME**

- Zero to 90° positive stop — and minus one degree setting
- V-ways with automatic take-up for wear
- Collet Chuck



Valve Refacer

**SUPER FINISH
AND
EXTREME
ACCURACY**

MODEL
K403C

Occasionally a manufacturer develops a product that is so outstanding that the trade gives it a rousing welcome. The K. O. Lee Lifetime Refacer is such a product.

The K403C refacer does an exceptionally fine job of grinding valves—providing a super finish seldom equaled by more expensive machines.

K. O. Lee Company, Aberdeen, S. D.

Faster Edging of

AUTO GLASS

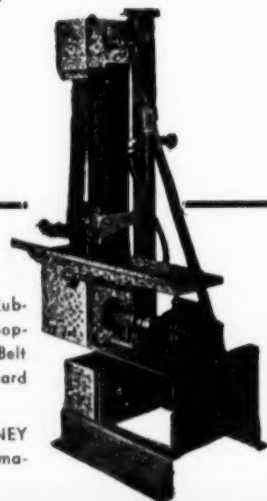
**Plus 60% Increase
in Belt Life . . .**

"SOMACA" No. 106-FB12RP
106" WET ABRASIVE BELT
MACHINE WITH "CONTACT
RUBBER ROLLER PLATEN"

**Standard of the
Glass Shop Trade**

The sensational new Contact Rubber Roller Platen on the ever popular Somaca Wet Abrasive Belt Machine makes a combination hard to beat.

Start saving **TIME** and **MONEY** now—write for complete information and prices.



SOMMER & MACA Glass Machinery Co.

Automotive Department

3624 SOUTH OAKLEY AVENUE CHICAGO 9, ILLINOIS

British Cars Time Trials

A total of 37 British automobiles, ranging from the stately Rolls Royce "Silver Cloud" to the tiny, two-cylinder Berkeley sports car, were on hand at the newly-opened Lime Rock Race Course, Conn., May 25. Event was the second annual Press Trials and Driving Day conducted by the British Automobile industry in this country.

Highlighting the event, which is patterned after the Press Day conducted by the British Motoring Guild every year at Goodwood, England, was the first public unveiling of the new Jaguar XK-150 convertible. This Jaguar is equipped with four-wheel disk brakes and is a production line car.

Some 425 press, radio and television representatives and members of their families took advantage of this opportunity to drive personally, under controlled speedway conditions, all makes of automobiles imported into the United States from Great Britain.

The cars available at the track were: an Aston Martin Mark III; Austin Healey 100-Six hardtop and roadster; Bentley-S Sedan; Berkeley roadster; Hillman Husky, convertible and sedan; Jaguar Mark VIII sedan, 3.4 sedan, XK-150 convertible, XK-140 hardtop, roadster and convertible; Land Rover; MGA roadster and hardtop and MG-Magnette; Morris-1000 sedan, Rolls Royce "Silver Cloud" sedan; Rover-105 sedan; Sunbeam Rapier sedan; Triumph TR-3 hardtop and roadster.

Gulf Unveils Research Center

Designed and instrumented in detail, one of the most modern laboratories for research into automotive fuels and lubricants was unveiled May 28 at Gulf Oil Corporation's Research Center at Harnarville, Pa.

A masonry and steel frame Automotive Building, covering 49,000 sq. ft., a Fuel Blending Building of 2,500 sq. ft., a tank farm with 166,175 gallons capacity, and a pipeline system, make up the new facilities. They bear the name R. B. Mellon Automotive Products Laboratory.

Heart of the elaborate installation lies in 20 room-size engine test cells. Within these sound-proof, specially ventilated rooms, a variety of engines are used to evaluate experimental products under severe test conditions.

Operators observe the tests through picture windows in corridors which flank the cells. They record and control engine functioning with the aid of console type panels. Once set up, tests may run 24 hours a day, seven days a week.



WORRYING ABOUT

- ADHESION ...
- POPPING ...
- PEELING ...
- CHECKING ...
- ETCHING ...
- RUSTING ...
- DULLING ...
- SANDING USE



The SUPERIOR SEAL and BOND!



USE IT ON AUTO BODIES



USE IT ON TRUCK BODIES

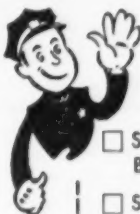


USE IT ON TRAILER BODIES

Here are a few of the many reasons why X-I-M FLASH BOND should be used in every auto, truck and trailer body painting operation: Provides outstanding adhesion on all Ferrous and Non-Ferrous Metals. Acts as a rust inhibitor, retarding progressive action of rust. Effectively seals wood, plywood, pressed wood, etc. Imparts flexibility to finish coats. Resists damage to finish due to sudden weather changes. Helps prevent dulling, chipping, flaking, etc. Little or no sanding necessary on chemically clean old painted surfaces. Economical to use on any job.

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H. FORSBERG CO.,

MA-3

5103 Lakeside Ave., Cleveland 14, Ohio

- ☐ Send complete information on X-I-M FLASH BOND.
- ☐ Ship us one gallon via parcel post and invoice through our supply house. (Give name of supply house below.)

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City _____ Zone _____ State _____

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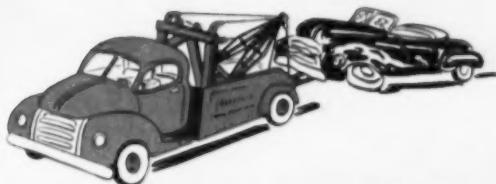
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STEP-UP Your INCOME with 20 TONS of Earning CAPACITY



HOLMES 650 WRECKER

A Heavy Duty Model with 20 TONS of Earning Capacity. Power aplenty for most of today's Big, Heavy jobs, yet fast and flexible enough to be economically used for light Cars and Trucks. The Wrecker has double swinging booms, each of 10 Ton Capacity, Outboard Legs, Dual Controls, extra large Drums and many other features.



**"BIG PROFIT JOBS
DON'T DRIVE-IN
THEY'RE TOWED-IN"**

HOLMES
Wrecker Equipment

Ever stop to think what the addition of a Holmes Heavy Duty Wrecker with its 20 TONS of Earning Capacity would mean to the operation of your Shop? If not, then here are some facts about this versatile unit and how it can make money for you. The 650 Model, when mounted on a suitable Truck, provides everything a good operator needs to handle almost any pick-up or recovery job . . . even large Trucks and Busses. Being in a position to render Fast, Efficient Road Service of this type will enable your shop to pick up jobs it could NOT otherwise obtain. It will extend your Services Miles Away from the shop and by so doing, greatly step-up earnings with extra profits from Towing and Wreck Rebuilding. Why not give your service operations a LIFT . . . with a New HOLMES 650 WRECKER. Write today for Details.

ERNEST HOLMES COMPANY

Chattanooga 7,

Tennessee

The Last Laugh



Librarian: What kind of a book would you like? Something light or something heavy?

Matron: It doesn't matter. I have my car outside.

And then there was the fellow who couldn't quit horsing around until they finally made him a groom.

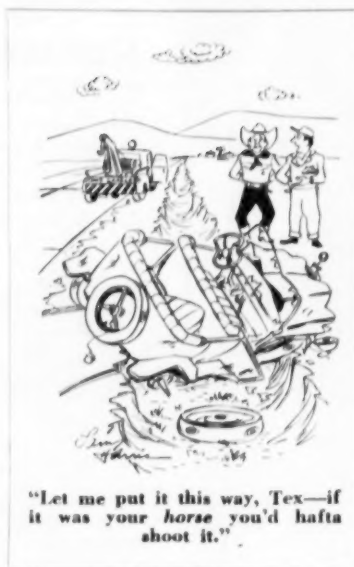
Waiter: Yes, sir, everything here is cooked by electricity.

Diner: I wonder if you would mind giving this steak another shock?

The man who says, "I run things at my house," usually refers to the lawn mower, the washing machine, the furnace, the vacuum sweeper and the errands.

Policeman: Did you break that window on purpose?

Boy: I was cleaning my slingshot and didn't know it was loaded.



Husband: I hate to admit it, dear, but I bought another ten-thousand-dollar policy from that life insurance salesman.

Wife: Oh, I could kill you.

Two flies were discussing a deceased relative. Said one, "All I heard was that he died in an accident. What happened?"

"It seemed someone swatted him just as he lit on the adding machine. And to think how happy he had been for weeks in that office."

"That's the way it goes," the other consoled. "I guess this time his number was up."

Beautiful new neighbor: Little boy, I need a loaf of bread from the store. Do you think you could go for me?

Little boy: No, but I heard my old man say he could.

Driving instructor (to pretty student): This is a handbrake. You put it on in case of emergencies.

Student: I see. It's like a bathrobe.



Instructor: What happens when a human body is completely immersed in water?

Student: The phone rings.

"What's an armature?"

"It's a guy who plays football for nothing."

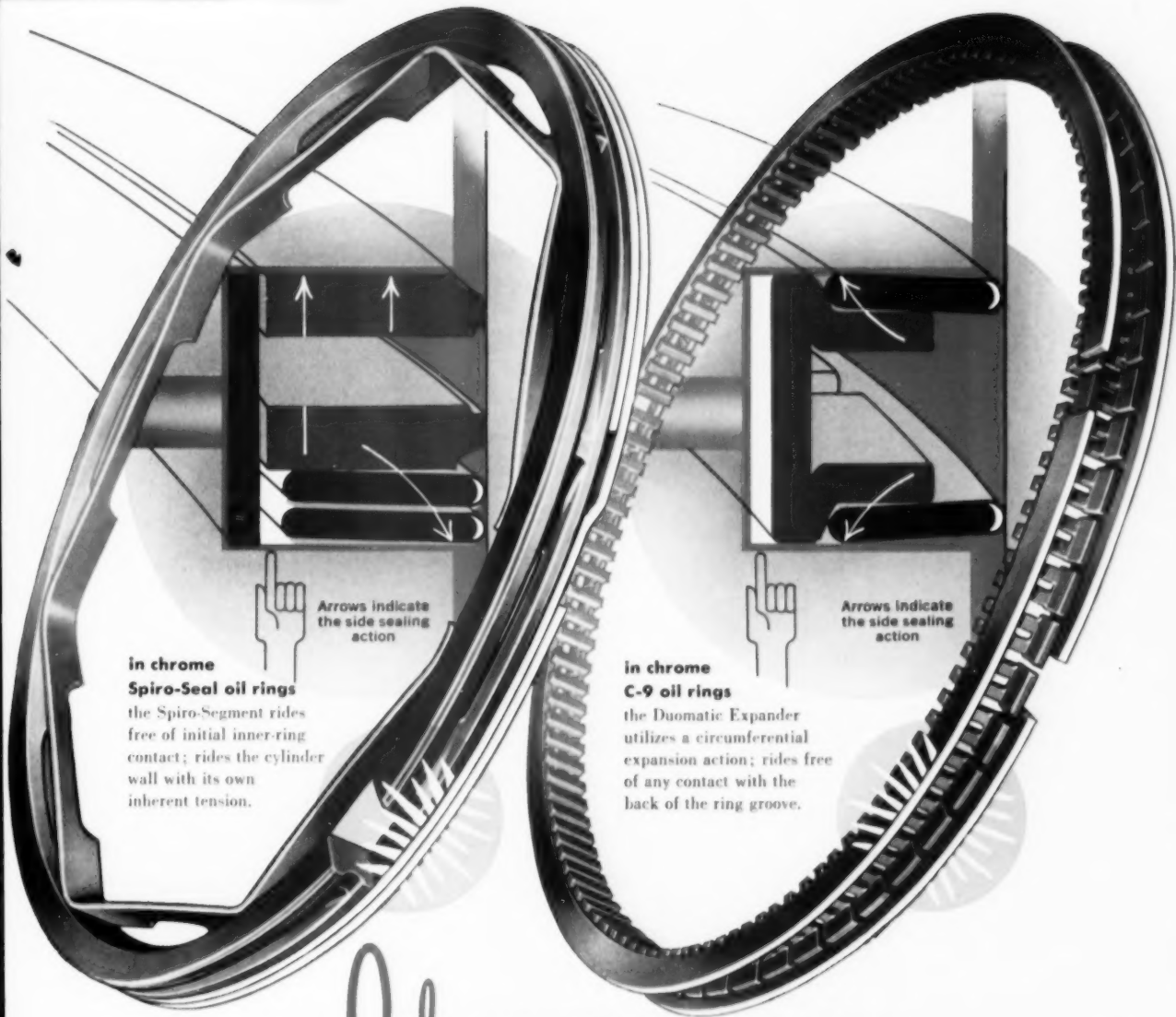
Biology teacher: What two kinds of wood make a match?

Johnny: He would and she would.

"I want to be excused," said a worried looking juryman to the judge. "I owe a man fifty dollars and as he is leaving for overseas by the next train I want to catch him and pay him the money. It may be my last chance."

"You are excused," said the judge in icy tones. "I don't want anybody on the jury who can lie like that."





**in chrome
Spiro-Seal oil rings**
the Spiro-Segment rides
free of initial inner-ring
contact; rides the cylinder
wall with its own
inherent tension.

Arrows indicate
the side sealing
action

**in chrome
C-9 oil rings**
the Duomatic Expander
utilizes a circumferential
expansion action; rides free
of any contact with the
back of the ring groove.

Arrows indicate
the side sealing
action

Only **RAMCO** has **BOTH** types of **Circumferential Expansion Chrome Oil Rings** to insure ***FINEST Get UP and GO!*** for **EVERY Engine!**

Not just one exclusive chrome plated oil ring . . . but two! That is Ramco Engineering's answer for you who want finest re-powering results and maximum customer goodwill. Chrome C-9 or Chrome Spiro-Seal, whichever oil ring will deliver finest re-powering results, is the oil ring you get when you use Ramco engineered 10-Up sets.

Each ring has years-ahead features which make it the outstanding performer in the engine for which each is recommended. In C-9, for example, you get Ramco's exclusive Circumferential Expansion construction. This puts up to 20% more contacts on the chrome rails to assure maximum conformability. It also provides ad-

vanced side-sealing action so important for many of today's engines.

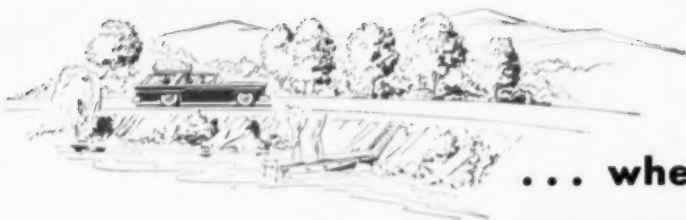
In Spiro-Seal Oil Rings, you get the exclusive Ramco Circumferential Expansion action of the Chrome Spiro-Segment for both efficient side sealing and superior conformability. This

plus the Double-Life Principle which utilizes, also, a full fledged, cast-iron oil ring makes it the outstanding performer for most of today's re-ring jobs. For all the facts about Ramco engineered 10-Up piston ring sets, see your Ramco Jobber, or write Ramsey Corporation, St. Louis 8, Mo.

Whatever is FINEST for the Engine you get in

RAMCO

10_{up} piston ring sets

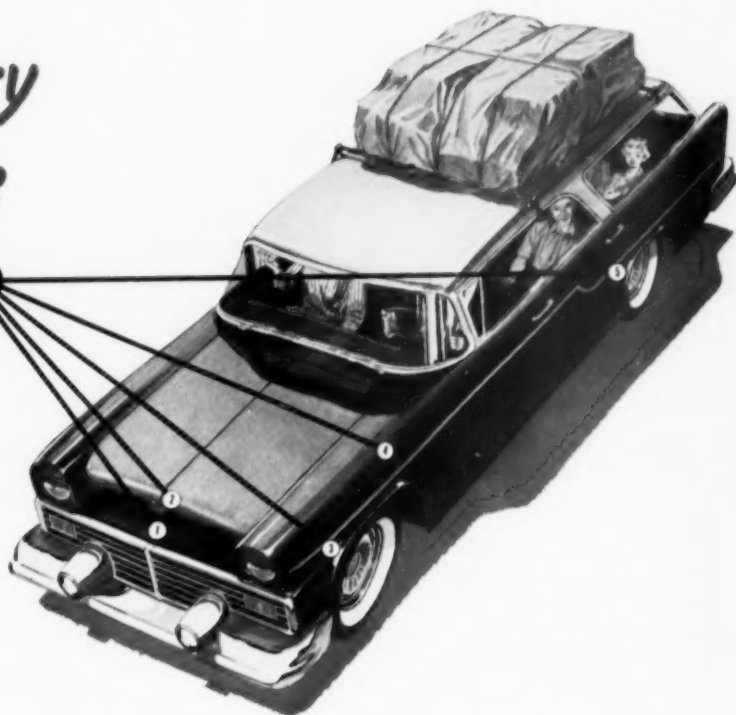


... when you're making
VACATION check-ups

*it's easy
to find these*
**VACATION
PROFITS**

Now that summer is here you'll be busy getting your customers' cars ready for vacation trips. It is profitable work for you and a real service to your customers—particularly when you include cooling and brake systems in your check-up. Radiator hose . . . fan belts . . . brake lining . . . brake fluid . . . and brake parts are items that offer you extra profits, because they are frequently overlooked until it's time for the vacation check!

Be sure to use Thermoid when you replace any of these vital parts. You can count on Thermoid products to give the outstanding service that means complete customer satisfaction. Call your Thermoid jobber.



Thermoid

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